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PUBLIC UTILITIES
COMMISSION

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of)

PUBLIC UTILITIES COMMISSION)

Instituting a Proceeding to Investigate)
Proposed Amendments To the Framework)
For Integrated Resource Planning.)
_____)

Docket No. 2009-0108

FINAL STATEMENT OF POSITION OF

HAIKU DESIGN AND ANALYSIS

AND

ATTACHMENTS A, B, C & D

AND

CERTIFICATE OF SERVICE

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FINAL STATEMENT OF POSITION OF
HAIKU DESIGN AND ANALYSIS

Carl Freedman, dba Haiku Design and Analysis (HDA) respectfully submits is Final Statement of Position (FSOP) regarding proposed amendments to the Framework for Integrated Resource Planning (IRP Framework). Despite the title of this submission, HDA's position on the issues in this docket should not be considered final. HDA looks forward to further discussion with the parties and dialogue during the panel hearings. HDA will state its final position in its briefs.

POSITION ON THE FORMALLY IDENTIFIED ISSUES IN THIS DOCKET

In its ORDER APPROVING THE STIPULATED PROCEDURAL ORDER, AS MODIFIED, the Commission specified the following issues for the instant docket:

1. What are the objectives of CESP and how do they differ from the objectives of IRP?
2. What is the basis for each of the proposed changes to the IRP process, and are these changes reasonable and in the public interest?

3. Whether the proposed changes to the IRP process should include changes to reflect differences between electric cooperatives and investor owned utilities?
4. What should be the role of the state's public benefits fee administrator?

HDA discussed each of these issues in its Preliminary Statement of Position in this docket. HDA's position on these issues has not changed. Rather than duplicate this discussion, HDA incorporates its Preliminary Statement of Position by reference as part of its Final Statement of Position.

HDA also provides an updated description of its general proposed modifications to the IRP Framework attached to this FSOP as Attachment A. Attachment A is an updated version of the Attachment A to HDA's Preliminary Statement of Position which, in turn was a substantially modified version of "HDA's Informal Proposed Modifications to the Proposed CESP Framework" provided to the parties on August 28, 2009 in accordance with the schedule of proceedings in this docket.

HDA'S PROPOSED FRAMEWORK

HDA participated in several extended ad hoc discussions with several parties in this docket regarding proposed modifications to the existing IRP Framework. One product of these discussions was a "Joint Proposed Framework", dated December 19, 2009. The Joint Proposed Framework was assembled from drafts of individual sections by several contributing parties. HDA contributed to the Joint Proposed Framework but does not support all of its provisions.

Attachment B to this FSOP specifies HDA's support and exceptions to the specific sections of the Joint Proposed Framework. The Joint Proposed Framework is provided as Attachments C and D to HDA's Final Statement of Position (FSOP)¹. Attachment B, in conjunction with Attachment C and Attachment D comprise HDA's FSOP proposed framework.

HDA was a substantial contributor to several sections of the Joint Proposed Framework and provided comments to several other contributing parties. HDA has reservations and concerns about several aspects of the Joint Proposed Framework. These are noted and discussion in Attachment B. Despite these reservations and concerns, HDA supports the Joint Proposed Framework as a reasonable general approach for modifications to the existing IRP Framework and a workable basis for framing further examination of the issues in this docket. Hopefully, the use of the Joint Proposed Framework as a common starting point for discussions by several parties in this docket will simplify the task of determining the areas of agreement and disagreement on the issues in this docket.²

QUESTIONS POSED IN APPENDIX C OF THE NRRI PAPER, *CLEAN ENERGY SCENARIO PLANNING: THOUGHTS ON CREATING A FRAMEWORK*

Appendix C of the November 3 National Regulatory Research Institute paper titled *Clean Energy Scenario Planning: Thoughts on Creating a Framework* poses a list of thirteen questions to be addressed by the parties in the FSOP's in this docket. HDA

¹ Attachment C is the Joint Proposed Framework compiled by several parties in this docket after extended ad hoc discussions. Attachment D is the Joint Proposed Framework in "redline" format showing modifications with respect to the existing IRP Framework. HDA notes that it did not compile (and does not take credit for) the assembly of the Joint Proposed Framework.

provides responses to these questions below. In HDA's responses the "proposed framework" refers to the Joint Proposed Framework (Attachment C) as modified and clarified by Attachment B to this FSOP.

1. Does the proposed framework provide a reasonable process for defining the question(s) that the CESP must answer?

Yes. The proposed framework makes specific provisions for the Commission to identify specific issues, questions and objectives for each planning cycle. The pertinent questions for each planning cycle would also be identified in an advisory group process with the assistance of an independent process facilitator.

2. Does the proposed framework enable the Commission to meet its statutory requirements regarding the review and establishment of RPS and EEPS targets?

Yes. See response to question 1. Above. HDA has identified the need to provide planning information necessary for the Commission's review of the RPS and EEPS as a process design objective for its proposed framework.

3. Does the proposed framework provide a reasonable process for defining a starting point for scenario planning?

Yes. The proposed framework specifies that the parties identify, at the beginning of each planning cycle, a schedule of proceedings that includes filing of information with the Commission at several stages of the planning process. The first required stage is the identification of scenarios and planning assumptions. The proposed framework provides for an advisory group process with an independent process facilitator which can provide a venue for stakeholder input.

² The attached Joint Proposed Framework is identical (with the exception of captioning) to the "FSOP Joint

4. Does the proposed framework provide a reasonable process for discovering a plausible range of uncertainties and trends?

Yes. Although the process of discovering a plausible range of uncertainties and trends is not explicitly defined in the proposed framework, the framework provides a reasonable process by which all aspects of scenario planning can be accomplished. The identification of uncertainties and trends is explicitly required.

5. Does the proposed framework differentiate between uncertainties and predetermined trends?

Uncertainties and trends are not literally, explicitly differentiated in any language of the proposed framework but these elements are addressed separately as separate factors.

Uncertainty is explicitly identified as a factor which must be addressed in several aspects of the proposed framework.

6. Does the proposed framework provide a reasonable process for identifying the drivers of uncertainty that make a difference?

Yes. This is provided by requirements that uncertainty must be addressed and expected reasonable treatment of this important element of scenario planning. Specific requirements for sensitivity analysis are also provided.

7. Does the proposed framework provide a reasonable process for defining a reasonable number of scenarios that define a plausible range of different futures for planning decisions?

Yes. A reasonable process is provided. The proposed framework does not specify a specific number of scenarios that must be identified but does specify that

“A sufficient number and range of scenarios should be developed to (1) incorporate a broad range of perspectives and input from non-utility stakeholders and the public; (2) provide meaningful breadth to the scope of analysis and assumptions; (3) frame meaningful planning objectives and measures of attainment; and (4) test the robustness of candidate strategies with respect to a range of possible future circumstances and risks.”

8. Does the proposed framework enable the Commission to make timely and informed decisions about the budget for the Public Benefits Fee Administrator?

Yes. The role of the PBFA in the planning process and the objectives of the planning process to determine a reasonable budget for the PBFA are specifically identified. See also response to question 1 above.

9. Does the proposed framework provide a reasonable process for assessing actions and making decisions?

Yes. The process for assessing utility plans and action plans is specified. In addition, a principal focus of the proposed framework is to provide timely access to information necessary for the Commission to make regulatory determinations that require planning information. A process is identified for the Commission to use the utility planning analysis capability in interim periods between major plan review approvals. A process is identified for the Commission to amend the action plans as necessary due to changing circumstances and needs to assess and decide resource option approval actions that are not consistent with currently approved utility plans or action plans.

10. Does the proposed framework provide a reasonable process for ongoing monitoring and adjustments to approved plans?

Yes. A process is identified for the Commission to amend the action plans as necessary due to changing circumstances and possible needs to assess and decide resource option approval

actions that are not consistent with currently approved action plans. General provisions are made for ongoing evaluation but specific provisions are not identified.

11. Does the proposed framework create an efficient, transparent process that involves all relevant decisionmaking entities?

Yes. The proposed framework expands the role of the advisory groups and provides for an independent process facilitator to oversee the utility planning process and report to the Commission. Several provisions require open access to information and modeling assumptions. The proposed framework provides for broad participation in the advisory groups.

12. Does the proposed timeline provide adequate time for the participants to address effectively each step of the framework?

The proposed framework provides that a schedule of proceedings be determined at the beginning of each planning cycle. The time for participants to effectively address each step of the process would be determined at that time. This issue is difficult because of the needs for the process to move along in timely manner, the need for transparency and inclusion of comments from a broad spectrum of stakeholders and the logistics of work flow to meet these needs and provide thorough analysis.

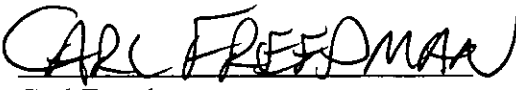
13. Does the proposed frequency of scenario-planning cycles allow the Commission to meet its statutory responsibilities efficiently?

Yes. The proposed framework provides a three year major planning update cycle. Specific provisions are specified for the Commission to identify specific issues, questions and information to be addressed at the beginning of each planning cycle. In addition, a specific

means for the Commission to use the utility planning analysis capability is provided in the interim between major plan approvals.

This concludes HDA's Final Statement of Position

Dated: December 19, 2009; Haiku, Hawaii

Signed: 
Carl Freedman
dba Haiku Design and Analysis

HAIKU DESIGN & ANALYSIS**GENERAL PROPOSED MODIFICATIONS TO THE IRP FRAMEWORK**

December 19, 2009

HDA proposes several general modifications to the existing Integrated Resource Planning Framework (IRP Framework). These are discussed in this attachment as general suggestions regarding improvements to Hawaii's long range utility planning process. This attachment is a modified and updated version of Attachment A to HDA's Preliminary Statement of Position.

In addition to these general proposed modifications, HDA supports several specific modifications to the language of the IRP Framework expressed in the Joint Proposed Framework included as Attachments C and D to HDA's Final Statement of Position. Attachment C is the Joint Proposed Framework compiled by several parties in this docket after extended ad hoc discussions. Attachment D is the Joint Proposed Framework in "redline" format showing modifications with respect to the existing IRP Framework. HDA contributed to the Joint Proposed Framework but does not support all of its provisions. Attachment B to HDA's Final Statement of Position identifies HDA's position with respect to each section of the Joint Proposed Framework.

SPECIFIC OBJECTIVES OF HDA'S GENERAL PROPOSED MODIFICATIONS

HDA's proposed modifications to the IRP Framework are focused primarily on the following issues and objectives for an improved planning process:

- **Timeliness:** The planning process should provide timely, up-to-date planning information.
- **Usefulness:** The planning process should serve the ongoing current, specific regulatory needs of the utilities and the Commission.
- **Accessibility:** The planning process should be accessible to interested stakeholders and should facilitate consideration of stakeholder comments and concerns.
- **Flexibility:** There should be a clearly defined process to provide a workable balance between maintaining planning flexibility and making regulatory determinations. It should be clear what process will apply to the approval of long range plans and action plans and what process will apply to updates and amendments necessary to provide meaningful guidance regarding specific project approvals and other regulatory determinations.

HDA's GENERAL PROPOSED MODIFICATIONS

To address these specific objectives HDA suggests several possible modifications to the IRP Framework:

- A Schedule of Procedure with Interim Filings During the Planning Process
- Interim Use of Utility Planning Analyses for Regulatory Purposes
- Interim Update and Approval of Amendments to Long Range Plans and Action Plans
- Expanded Role of Advisory Groups and an Independent Process Facilitator

In addition to these modifications addressing the specific objectives above, HDA proposes modifications to promote the concept of scenario planning analysis:

- Modifications to the Existing Prescriptive Analysis Requirements to Require Scenario Planning Analysis

HDA's general proposed modifications are discussed as suggestions below in the context of each specific objective identified above.

Timeliness

The IRP process proved effective in establishing DSM as an important component of the Hawaii electric utility industry. The IRP process has not been ineffective, however, in governing supply-side utility investments. This failure is in part due to the structure of the IRP Framework, in part due to the utilities' interpretation and application of the Framework, in part due to the overarching preemptive reach of federal law (PURPA)... but it is also largely due to the fact that the IRP planning process has been so monolithic and so slow in its preparation and review that IRP planning is persistently overtaken by more immediately pressing individual projects.

At no time since the institution of the IRP process has there been an approved plan that is meaningfully current and up to date. There is always one approved IRP plan that is outdated and one pending IRP plan that is either incomplete or not yet approved. By the time IRP plans are approved (if they in fact ever get approved) they are outdated to the point that, when specific capital projects come for review before the Commission, other more up-to-date presumptions (regarding forecasted levels of demand, fuel prices and "base case" preferred plans) rather than the approved IRP plan are used in "governing" the utility capital projects. The process of updating program implementation schedules (action plans) has never worked in a timely manner or served any intended purposes.

Suggestions:

(1) Establish an Interim Process For Updating Information and Amending Action Plans

The general concept of this alternate process would be to use a 3 year planning cycle as the basis for major updates of long range utility plans but allow and expect interim updates to the planning assumptions and Action Plans as circumstances develop. The objective would be to maintain an up-to-date analysis capability and Action Plan at all times for use as directed by the Commission whenever needed. The planning process would have three parts procedurally:

- A three year cycle for major updates to the utility long range plans. This would be similar to the existing scheduling of the IRP process except that a schedule of proceedings would be established requiring filings with the Commission at specified stages as the planning process proceeds (instead of waiting until the planning process is complete before any filings are made with the Commission).
- A quick turn-around information development and review process: The Commission would request specific planning-related information from the utility at any time as needed for any regulatory purposes that arise in any proceeding. The Commission's requests for information would be available to planning docket parties and advisory group members (with notification and availability of documents via the Commission's Document Management System). The Commission could request or allow comments (regarding the requested information and utility responses) by the planning docket parties and advisory group members.
- A process for amending plans and action plans as necessary during the interim period between major plan approvals. The process would allow consideration of action plan amendments concurrent with a non-conforming resource approval application with a specified process for notification and opportunity for comment by planning docket parties and advisory group(s).

Further description of how such a process might work is provided in the section below:

"Description of a Possible Planning Process Procedure."

Usefulness

The IRP process should provide the Commission with up-to-date planning information in order to make informed decisions in several ongoing regulatory venues including:

- determination of the objectives, nature, target impacts and budget for the energy efficiency programs to be implemented by the PBFA
- determination of the objectives, nature, target impacts and budget of demand response/load management programs that should be implemented by each utility
- determination of what generation resources or blocks of resources should be acquired through the Competitive Bidding Framework

- establishing, evaluating, maintaining and determining the reasonable pricing of tariffs designed to encourage acquisition of renewable resources (such as feed-in tariffs, net energy metering and standby charges)
- determining short run and long run utility avoided costs and the reasonableness of wholesale payment rates that may be above “least” avoided cost
- evaluating the prudence of CIP approvals for generation, transmission and distribution (such as advanced metering) projects.
- review, assessment and modification of the RPS and EEPS

The Commission’s needs regarding what information is necessary to serve ongoing specific regulatory purposes will likely change from IRP cycle to IRP cycle.

Suggestions:

(2) Addition to the IRP Procedural Schedule

- At the beginning of each three-year IRP review cycle the Commission would (independently or after a public meeting) specify:
 - a list of questions and issues that the specific round of IRP analysis and the resulting plan should address, and
 - any specific objectives or scenarios that should be considered in that specific round of IRP analysis
- As described in (1) above, it would be expected that a primary use of the utility planning process would be requests by the Commission for planning-related information from the utility at whatever time needed for any regulatory purposes. The utility would maintain an updated planning capability for this purpose at all times (just as they essentially already do).

(3) Diversified Analysis Methods

- The analysis performed in the IRP process should not be limited to the current Strategist or other integration modeling tools. The scope of analysis performed in the IRP process should include any analysis necessary to address the specific planning information needs identified by the Commission to make informed decisions in all regulatory venues.

Accessibility

One success of the IRP process has been the extent to which utility planning information and analysis is accessible to stakeholders and the general public. Access to information and involvement of stakeholders encourages informed participation in matters that come before the Commission and encourages the utility to consider factors that otherwise would not be recognized prior to adjudication.

Several suggestions are provided that would increase the effectiveness of stakeholder participation in the IRP process:

Suggestions:

- (4) Provide some form of standing to members of the advisory groups.
 - The advisory group members (those organizations or individuals that do not apply for and attain intervenor status in the utility planning docket) could have a prescribed limited form of standing before the Commission that would allow them to petition the Commission to request relief regarding differences with the utility implementation of the IRP process. The requirements for filing such a petition would be more similar to the requirements to file an informal complaint (which anyone could do in any case) rather than requiring filing as a motion.
- (5) Provide for Commission participation in the advisory group process
 - The Commission staff (or one or more Commissioners) could preside over part of occasional advisory group meetings to invite and obtain comments and positions of advisory group members.
 - The Commission could issue orders to provide relief (require consideration of certain circumstances, resources or scenarios) recommended by advisory group members as determined to be reasonable.
- (6) Provide for an independent process facilitator
 - An independent facilitator could preside over some or all advisory group meetings and/or attend advisory group meetings and provide reports to the Commission. This would provide some “voice” for advisory group members independent of the utility without formal intervention.
- (7) Establish one or more Technical Advisory Group(s)
 - One or more technical advisory groups could be formed to provide review and analysis of modeling procedures, data or other technical matters. The technical advisory group could provide advice to the utility or could report to the Commission.
- (8) Require access to information and analysis methods
 - It could be required that the analysis methods (including integration model input, diagnostic and output files) that are maintained by the utility and used in the IRP process must be made available to qualified persons retained by or representing any parties or advisory group members, provided that necessary protective agreements are executed.

(9) Provide independent IRP analysis capability

- The Commission, Consumer Advocate or other entity could maintain an independent IRP analysis modeling capability. This was previously done by the Consumer Advocate (by HDA) in the first round of analysis of the utility IRP applications. (This provision is not included in the proposed framework).

Flexibility

The purpose of IRP generally and the role and purposes of the specific determinations made in the IRP process should be clear in any modified Framework.

There should be a balance between the rigor of the IRP process and the flexibility of the IRP process. There are several tradeoffs and correlations that should be balanced. These were discussed at some length in Docket No. 6617 in the original establishment of the IRP process.

- Analytical Rigor
 - The IRP analytical methods need to be rigorous enough to address the considerations necessary to make meaningful determinations.
 - The IRP analysis methods should not be so cumbersome that they are unwieldy or cannot be used to produce timely information as required.
- Planning Flexibility versus Regulatory Rigor
 - To serve effectively, plans must be flexible and somewhat general
 - Plans must be able to change according to always-changing circumstances.
 - Resources may be identified generally by type but may not require identification of specific sites, ownership or financing which may not yet be determined
 - To serve as regulatory instruments (to make final determinations of the prudence of specific projects or programs) plans would have to be specific and deterministic.
 - Regulatory determinations tend to be final unless formally modified (otherwise they are not regulatory determinations)
 - Regulatory determinations (regarding determinations of prudence) require at least some minimum threshold of rigor that exceeds the level of rigor otherwise necessary for planning purposes. Specific projects or programs with specific budgets would have to be identified and reviewed prior to regulatory approval.

- Degree and Scope of “Approval” of utility plans
 - In the existing implementation of the IRP Framework it is understood that any resource included in an approved IRP plan or program implementation schedule must still be reviewed and approved by the Commission in another proceeding prior to implementation.
 - From a functional standpoint, the meaning of approval of utility plans and implementation schedules is not clear. Although it is required in the existing IRP Framework that approved plans will “govern” utility capital expenditures, no utility capital expenditures have been denied because the utility did not go through the prescribed procedures to revise outdated integrated resource plans.
 - Rather than “approve” utility plans the Commission could “accept” utility plans without any implied approval.

HDA notes that the degree of required rigor, flexibility and the degree of Commission approval are all related to the question of who ultimately is responsible for the success of the utility plans. To the extent the utility is ultimately responsible and will be held accountable for reliable service and the ongoing prudence of its resource acquisitions it would follow that the utility plans should be the utility’s kuleana. To the extent that the Commission (or the legislature) dictates specific actions or requires specific projects to be implemented or acquired by the utility, the responsibility for outcomes and prudence shifts to the State and ultimately, utility ratepayers. The existing IRP Framework leaves the planning responsibility with the utility subject to the approval of the Commission. Advisory groups are strictly advisory. The utility must obtain separate approval for projects and programs included in approved plans.

Suggestions:

(10) The modified IRP Framework should be clear regarding the level of expected flexibility, analytical rigor, regulatory rigor and the nature and finality of resulting determinations by the Commission. It should be clear and internally consistent whether:

- IRP plans would “govern” utility capital projects or would become guidelines
- Projects need to be identified in site specific detail or whether projects are more generally considered
- inclusion of a project in the IRP would serve as a presumption of prudence for purposes of later proceedings before the Commission (as proposed by the HECO Companies)
- the Commission would have any limits on the amount of time to take action on an IRP application prior to it automatically being deemed approved (as proposed by the HECO Companies).

DESCRIPTION OF A PROPOSED PLANNING PROCESS PROCEDURE

The process described below could be implemented either with or without any formal Commission approval of long range plans or Action Plans.

- The Commission would initiate an ongoing planning process for each utility.
 - Establish one or more ongoing dockets to administer the planning process for each utility with a three-year cycle for major reviews
 - Establish one or more advisory groups for each utility and/or for several energy utilities collectively
- At the beginning of each three-year IRP review cycle the Commission would (independently or after a public meeting) specify:
 - a list of questions and issues that the specific round of IRP analysis and the resulting plan should address, and
 - any specific objectives or scenarios that should be considered in that specific round of IRP analysis
- Use a 3 year planning cycle to establish and review:
 - planning assumptions (projected demand, fuel prices, resource characteristics)
 - analytical methods (integration modeling, rate impact analyses, etc)
 - a base long range (20 year) resource plan
 - a five year (or longer) Action Plan
- Each utility would maintain a modeling and analysis capability that is current and up to date at all times.
 - On an ongoing basis, update all important planning assumptions, forecasts, demand estimates, etc. as frequently as circumstances require and configure the planning process analytical models accordingly.
 - Notify the Commission, parties and advisory group whenever planning assumptions are updated.
- As needed for any regulatory purposes, the Commission would request prompt and timely analysis from the utilities based on current, up-to-date planning assumptions.
 - In the context of any docket, the Commission could issue information requests to the utility requesting information and/or analysis based on current planning assumptions and modeling analysis capability.

- Planning docket parties and utility advisory group members would be notified and documents would be made available via the Commission's Document Management System.
- The Commission could, at its discretion, issue such information requests and/or the utility responses to the planning process docket parties, utility advisory group or any technical advisory group for review and comment.
- Each utility would maintain a current up-to-date Action Plan at all times.
 - To the extent that circumstances or changes in planning assumptions substantially affect the merits of the base resource plan or action plan, the Commission, parties and advisory group would be notified.
 - Action plans should be updated in accordance with supporting analytical methods and with the informed advice of the parties and advisory group.
 - Modified (updated) Action Plans would be prospective pending any explicit approval of any Action Plan components by the Commission but would always be kept up-to-date and publicly accessible to inform all stakeholders of current planning assumptions presumed by the utility.
 - Actions proposed by the utility in any docket before the Commission would be reviewed by the Commission in light of the current, most recently approved Action Plan.
 - If proposed actions are not consistent with the most recently approved Action Plan, the proposed actions must be consistent with the current updated Action Plan which should be reviewed by the Commission prior to or concurrently with the Commission's review of the proposed action with the informed advice of the planning docket parties and advisory group.
- Any party or advisory group member could petition the Commission at any time requesting the Commission's attention to review or take action regarding changes to planning assumptions or changes in Action Plans.
 - Parties could (as they currently may) request relief from the Commission by Motion.
 - Provision would be made for advisory group members to petition the Commission for action regarding changes to planning assumptions, long range plans or Action Plans by an informal process.

Other Suggestions

(9) The section of the existing IRP Framework and the entire section of HECO's proposed CESP Framework regarding intervenor funding is so restrictive as to be inoperable. If it is intended that there should be intervenor funding, then a reasonable proposal should be considered. If not, then the entire sections should be deleted. Let's not pretend.

(10) The section of the existing IRP Framework pertaining to DSM program cost recovery and incentives (Section III.F. at pages 16-19) is no longer necessary or applicable and could be deleted. Similarly, the provisions of the existing IRP Framework that establish that pilot DSM programs are appropriate (Section V. at pages 24-25) is no longer necessary and could be deleted. The corollary modified sections of HECO's proposed CESP Framework are not necessary and should be deleted.

(11) Incentives to the utility for performance in implementing renewable resources or other components of the HCEI initiatives have been proposed in other dockets. Performance incentives could be considered as part of the modified Framework in much the same way as DSM utility incentives were introduced and incorporated in the original IRP Framework.

HDA PROPOSED FRAMEWORK

December 19, 2009

HDA participated in several extended ad hoc discussions with several parties in this docket regarding proposed modifications to the existing IRP Framework. One product of these discussions was a "Joint Proposed Framework", dated December 19, 2009. The Joint Proposed Framework was assembled from drafts of individual sections by several contributing parties. HDA contributed to the Joint Proposed Framework and supports most but not all of its provisions.

This attachment (Attachment B) specifies HDA's support and exceptions to the specific sections of the Joint Proposed Framework provided as Attachments C and D to HDA's Final Statement of Position (FSOP)¹. This attachment, in conjunction with Attachment C and Attachment D comprise HDA's FSOP proposed framework.

HDA was a substantial contributor to several sections of the Joint Proposed Framework and provided comments to several other contributing parties. HDA has reservations and concerns about several aspects of the Joint Proposed Framework. These are noted and discussion below. Despite these reservations and concerns, HDA supports the Joint Proposed Framework as a reasonable general approach for modifications to the existing IRP Framework and a workable basis for framing further examination of the issues in this docket.

HDA provides comments regarding each section of the Joint Proposed Framework below and indicates its exception and support for the terms in each section. As indicated in HDA's FSOP, HDA reserves determination of its final positions on all of the issues in this docket until after hearing the discussion at the panel hearings. HDA remains open to comments and additional suggestions and will state its final position in its briefs.

HDA COMMENTS AND POSITION REGARDING THE JOINT PROPOSED FRAMEWORK

HDA specifies its position, support and exceptions to each section of the Joint Proposed Framework below. A quick summary is provided that identifies the principal areas where HDA takes exception to the provisions of the Joint Proposed Framework. HDA notes that its discussion focuses on the substance of the proposed modifications recognizing that in many

¹ Attachment C is the Joint Proposed Framework compiled by several parties in this docket after extended ad hoc discussions. Attachment D is the Joint Proposed Framework in "redline" format showing modifications with respect to the existing IRP Framework.

cases further refinement and improvements in language, clarity and internal consistency would be welcome.

Section numbers refer to the numbering and structure of the Joint Proposed Framework which generally follow the numbering and structure of the existing IRP Framework.

QUICK SUMMARY:

In short, HDA supports or has no objection to the provisions in the Joint Proposed Framework with the following exceptions, each of which is explained further below:

- The goal statement (II.A) and supporting definition of “Clean Energy Objectives” (I.) need further refinement before HDA can endorse them.
- HDA does not support governing principle #9 (II.B.9) which would give categorical priority to distributed generation over centralized fossil-based generation.
- HDA reserves judgment on several aspects of the provisions regarding public participation (III.E) including whether the Commission should appoint advisory groups, whether advisory group membership constituency should be specified explicitly, and whether advisory groups should be given decision making and action-taking responsibilities.
- HDA notes that there are numerous details and internal consistencies to be resolved.

SPECIFIC COMMENTS AND POSITION REGARDING THE JOINT PROPOSED FRAMEWORK:

I. DEFINITIONS

HDA provided several definitions in response to CA/HDA-IR-2 that are included in this section including definitions for “Scenario”, “Strategy”², “Resource option”, “Objective” and “Action”. HDA has not thoroughly reviewed all of the other definitions in this section.

HDA will continue to consider the appropriateness of the definition of “Clean Energy Objectives” since this term is used in characterizing the goal and objectives elsewhere in the Joint Proposed Framework. This definition needs refinement.

II. INTRODUCTION

II.A. Goal of Integrated Resource Planning

This section should be refined. HDA does not propose an alternate goal statement without some further discussion with the other parties. HDA will defer stating a final position on the goal statement until it briefs.

II.B. Governing Principles (Statements of Policy)

² The fourth word in the definition of “Strategy” should be “prospective” instead of “perspective”.

HDA has no objection to the list of governing principles with the exception of principal #9 which states that plans shall “prioritize” distributed generation over central fossil-based generation. HDA is concerned that ascribing priority to distributed generation resources in the Framework may possibly lead to unexpected and undesirable results. Distributed generation has several benefits but a broad statement of priority in the Framework may be shortsighted. For example, exit of large customers from the utility system in favor of on-site diesel generation could occur during possible extended periods of relatively low oil prices or high utility rates. This would be distributed generation but would not necessarily be a measure to be encouraged.

II.C. Utility's Responsibility

(HDA was primary author of modifications to this section).

The principal modifications to this section include

- requirements that the utility maintain a current and up-to-date analysis capability
- requirements that the utility maintain and make publicly available current and up-to-date action plans and resource information.

HDA supports the proposed modifications to this section.

II.D. Commission's Responsibility

(HDA was primary author of modifications to this section).

The principal modifications to this section include

- provisions for the Commission to regularly utilize the utility planning analysis capability as needed in any regulatory matters
 - determining, as appropriate, the extent to which the planning docket parties and advisory groups would be allowed to provide responses
- provisions for Commissioners or Commission staff to participate in the advisory group process
- provisions for the Commission to provide relief recommended by planning docket parties or advisory groups

HDA supports the proposed modifications to this section.

II.E. Consumer Advocate's Responsibility

(HDA was primary author of modifications to this section).

There are no substantial changes recommended for this section.

HDA supports the proposed modifications to this section.

II.F. Public Benefit Fee Administrator's Responsibility

(HDA was primary author of modifications to this section).

This new section describes the role of the Public Benefit Fee Administrator's role in the planning process.

HDA supports the proposed modifications to this section.

III. THE PLANNING CONTEXT**III.A. Major Steps**

There were no substantial changes to this section.

HDA supports the proposed modifications to this section but notes that it may be possible to shorten and simplify this section.

III.B. The Planning Cycle

(HDA was primary author of modifications to this section).

This section, along with the following section (III.C The Docket) was substantially revised to enhance the timeliness, usefulness, accessibility and flexibility of the planning process. The existing IRP Framework provides for a three year major review and annual updates. The Framework as modified in this section retain the three year annual review cycle but would provide a process to provide more functional planning information in the extended interim periods between major plan approvals. A process is provided for the Commission to obtain timely planning information during interim periods with appropriate opportunity for stakeholder notice and comment. Specific provisions are made for fair and timely amendments to utility action plans as may be required by changing circumstances for necessary review of applications for acquisition of resource options during interim periods between major plan approvals.

HDA supports the proposed modifications to this section.

III.B.1. Three Year Major Review.

(HDA was primary author of modifications to this section).

Modifications to the three year planning cycle include:

- Appointment of advisory groups by the Commission rather than by the utility.
- Establishment of technical advisory group(s)
- Explicit provisions for the Commission to frame issues, questions, scenarios and/or objectives specifically for each round of planning at the beginning of each planning cycle.

HDA looks forward to further discussion regarding whether the Commission or utility should appoint advisory groups. The text in the Joint Proposed Framework reflects the predominant sense of the participants in recent discussions.

Provisions for the Commission to identify issues, questions, scenarios and/or objectives that are specific to each planning cycle are a way to recognize and address the fact that the specific needs to be served by the planning process will continue to evolve. In some planning cycles there may be specific issues that need to be addressed. For example, in some planning cycles information will be necessary to address periodic Commission reviews of the ongoing reasonableness of renewable portfolio standards and energy efficiency portfolio standards.

HDA supports the proposed modifications to this section.

III.B.2. Ongoing Analysis and Planning Capability.

(HDA was primary author of modifications to this section).

This is a new proposed element in the planning process that would encourage the Commission to use the utilities' planning analysis capabilities and stakeholder manao to serve the Commission's ongoing regulatory needs for current planning information during interim periods between major plan approvals.

- Utilities would be required to maintain planning analysis capability (as they currently do).
- Planning assumptions would be updated as necessary and changed as necessary with notice to the Commission, planning docket parties and advisory groups and with opportunity for comment as appropriate.
- The Commission would request prompt information and/or analysis from the utilities as necessary for any regulatory purposes with notice and opportunity to comment (as the Commission determines to be appropriate) by the planning docket parties and advisory groups.

HDA supports the proposed modifications to this section.

III.B.3. Current Action Plan.

(HDA was primary author of modifications to this section).

This section would provide that each utility must maintain current and up-to-date action plans. Changes to action plans would be made as necessary with notice to the Commission, planning docket parties and advisory groups with opportunity for comment by all stakeholders. Changes to action plans would be prospective until approved by the Commission. Specific provisions are provided for updating and amending action plans concurrently with specific applications for approval of resource options in other dockets with appropriate notice and

opportunity for comment by planning docket parties and advisory groups. Standards are provided regarding the scope of planning issues to be determined in dockets considering approval of resources that are not consistent with currently approved utility action plans.

HDA supports the proposed modifications to this section.

III.B.4. Evaluations.

(HDA was primary author of modifications to this section).

Evaluations would be required as determined by the Commission.

HDA supports the proposed modifications to this section.

III.C. The Docket

(HDA was primary author of modifications to this section).

Modifications to this section include

- Provision for a schedule of proceedings throughout the planning process with interim filings to the Commission at several specific stages in the planning process
- Provisions to specify the proper means for planning docket parties and advisory group participants to request the Commission to review or take action regarding changes to planning assumptions or action plans.

The current IRP process begins with the opening of a docket. The utility then prepares its plans and action plans with the advice of its advisory groups and does not file any documents with the Commission (except pleadings to extend timelines) until a completed application is filed with the Commission. A schedule of proceedings is then determined and a contested case process begins. The proposed modifications would provide for a schedule of proceedings to be determined at the beginning of the planning cycle with filings by the utility and parties (with opportunity for comments by advisory group participants) at several stages.

Provisions are also provided in this section specifying how parties and advisory group participants should request review or action by the Commission.

HDA supports the proposed modifications to this section.

III.D. Submissions to the Commission

(HDA was primary author of modifications to this section).

This section leaves most of the existing IRP Framework language intact. Provisions are added that address the need to address issues regarding utility transmission and distribution systems and “smart grid” improvements.

HDA supports the proposed modifications to this section although it would be possible to simplify and shorten the list of requirements identified in this section.

III.E. Public Participation

HDA did not draft this section but provided several comments. HDA notes the following concerns with the recommended modifications in this section:

- The Joint Proposed Framework would put the responsibility to organize the advisory groups with the Commission with requirements for advisory group membership to include specific agencies and stakeholder categories. HDA would like to reserve judgment on this proposal until there is further discussion at the panel hearings.
- The Joint Proposed Framework would provide for decision making and actions by the advisory group(s). In the existing IRP Framework, advisory groups are not decision making groups and are not given powers or duties to take actions. HDA has some concern with how this proposal would change the nature of the advisory group process. HDA would like to reserve judgment on this proposal until there is further discussion at the panel hearings.

A major policy determination in this docket is the nature and extent of provisions for public involvement in the utility planning process. To what extent is the planning process a utility responsibility and to what extent is the process an avenue for non-utility stakeholders to guide, influence or dictate any aspects of utility planning? There are several measures in the Joint Proposed Framework that would enhance the scope and effectiveness of public participation, including provisions requiring notification and opportunity for comment under specified circumstances and provisions for an independent process facilitator. These measures would increase the voice that the advisory groups would have with the Commission. Is it also necessary to provide the advisory groups with decision making and action-taking functions to provide sufficient public involvement? Clearly several parties believe so. HDA is not ready to endorse this aspect of the Joint Proposed Framework without further consideration.

- Provisions are made for an independent facilitator. HDA supports this proposal but would add several more specific provisions that were identified in HDA's response to COUNTIES-HDA-IR-1:

HDA suggested an independent process facilitator as one possible means to improve the effectiveness of the advisory group process and provide stakeholders (advisory group members) with additional "voice" in the utility planning process. There are three discernable aspects to the possible role of an independent process facilitator. Any combination of these roles might be appropriate:

- *Facilitation of all, some or parts of advisory group meetings or other public meetings associated with the utility planning process. This could include some or all of the conventional functions served by a public meeting facilitator (meeting planning, presiding over meetings, and/or recording).*

- *Providing reports to the Commission. If the facilitator provides reports to the Commission (made available to all parties), this would provide some voice to stakeholders concerns and motivate the utility to assertively address concerns raised by advisory group members. It must be clear that the facilitator is not an agent of the Commission and does not make decisions or represent the Commission in the process. Simply by providing reports to the Commission, however, the facilitator would bring to the process an awareness of the Commission's attention to the proceedings.*
- *The facilitator could assist with ongoing examination of the technical planning analyses to provide interpretation between the advisory group members and the utility planning analysts regarding the extent to which stakeholder concerns are properly characterized and addressed in the process. This would (a) add credibility to the utility process where technical analysis is properly performed to address stakeholder concerns, (b) add credibility in explaining why certain analyses might not be able to be performed and (c) provide leverage to encourage the utility to perform analyses that are meaningful to stakeholders.*

HDA presumes that any independent process facilitator would be paid for by the utility with allowance for utility cost recovery similar to the arrangement currently used for independent observers in the competitive bidding framework and recently provided to oversee the feed-in tariff queuing and interconnection process. For the planning process, however, it might be appropriate for the Commission to select the independent process facilitator in order to maximize effectiveness, ensuring that the facilitator is as independent and as credible as possible, both in the role of facilitating meetings and in the role of reporting to the Commission.

- In light of the proposed modifications there should be more clarity regarding the utilities' role in providing administrative, organization, logistic and management support for the advisory group process.

Noting the concerns and exceptions above, HDA generally supports the modifications in this section.

Deleted Section F. Cost Recovery and Incentives

HDA supports the deletion of this section of the existing IRP Framework as unnecessary in light of established precedents, recent changes in administration of demand-side management programs.

IV. PLANNING CONSIDERATIONS

HDA supports the proposed modifications to this section although some of the sections could use further refinement. The principal issue regarding this section is the extent to which the Framework should be prescriptive regarding the analytical process used by the utilities to prepare long range plans and action plans. The modifications to the IRP Framework proposed

by HECO and the Consumer Advocate would eliminate essentially all of the prescriptive requirements in this section. HDA prefers maintaining sufficient prescriptive terms to ensure that the planning process is thorough and follows the general established principles of the integrated resource planning approach along with a new emphasis on scenario planning and more explicitly addressing future uncertainties. HDA also recognizes that the planning process needs to be workable and flexible. Some simplification along with some refinement of this section may certainly be beneficial.

V. PILOT DEMAND SIDE PROGRAMS

HDA supports deletion of this section of the existing IRP Framework as unnecessary. At the time the existing IRP Framework was drafted there was no precedent for ratepayer funded demand side management programs and no prior integrated resource planning (otherwise required by the IRP Framework) to establish the justification for expenditures on these programs. This section provided that pilot programs could be implemented in the interim before programs were explicitly justified by IRP analysis. This section is no longer necessary for this reason.

Even for KIUC, which retains the responsibility for energy efficiency program administration, there is sufficient precedent and justification by prior planning analysis to support the approval of pilot programs. In any case, the Commission's authority to approve pilot programs does not spring from and is not limited to the scope of provisions in the IRP Framework.

PUBLIC UTILITIES COMMISSION

STATE OF HAWAII

A FRAMEWORK FOR INTEGRATED RESOURCE PLANNING

March __, 2010

I. DEFINITIONS

Unless otherwise clear from the context, as used in this framework:

“Action” (as used in the context of a utility action plan) means any specific activity (resource option, study, program, measure, etc.) that the utility intends to implement in order to provide required services and/or attain planning objectives.

“Action plan” means a program implementation schedule, as part of a utility’s integrated resource plan, representing a strategy, including a timetable of programs, projects, and activities designed to meet energy objectives over the first five to ten year period of the 20-year planning horizon, including the State of Hawai‘i’s clean energy objectives.

“Capital investment costs” means costs associated with capital improvements, including planning, the acquisition and development of land, the design and construction of new facilities, the making of renovations or additions to existing facilities, the construction of built-in equipment, and consultant and staff services in planning, design, and construction. Capital investment costs for a program are the sum of the program’s capital improvement project costs.

“CHP” means the production of useful heat and electricity from the same process or source.

“Clean energy” means electrical energy generated using renewable energy as a source or as electrical energy savings brought about by the use of renewable displacement or off-set technologies or energy efficiency technologies as defined as “renewable electrical energy” in HRS ch. 269, pt. V, § 269-91, as amended.

“Clean Energy Objectives” or “CE Objectives” means moving the State of Hawai‘i off of fossil fuel use and on to Clean Energy use, as mandated by federal, State and county laws (including, but not limited to, HRS ch. 269, pt. V, as amended), and as may be informed by policy statements and guidance.

“Costs” means the full and life cycle costs of a resource option.

“Cost categories” means the major types of costs and includes research and development costs, investment costs, and operating and maintenance costs.

“Cost elements” means the major subdivision of a cost category. For the category “investment costs, it includes capital investment costs, initial equipment and furnishing costs, and initial education and training costs. For the categories “research and development costs” and “operating and maintenance costs,” it includes labor costs, fuel costs, materials and supplies costs, and other current expenses.

“Demand-side management” or “DSM” means programs designed to influence utility customer uses of energy to produce desired changes in electricity demand, including, but not limited to, conservation, energy efficiency, demand response, load management, rate and fee design measures (e.g., declining block rate designs, generation hook-up fees, and standby charges), and renewable substitution.

“Design costs” means the costs related to the preparation of architectural drawings for capital improvements, from schematics to final construction drawings.

“Distributed Generation” or “DG” means electric generating technologies installed at, or in close proximity to, the end-user’s location including, but not limited to, renewable energy and combined heat and power (“CHP”) facilities, and dispatchable emergency generators.

“Effectiveness measure” means the criterion for measuring the degree to which the objective sought is attained.

“External benefits” means external economies; benefits to or positive impacts on the activities of entities outside the utility and its ratepayers. External benefits include environmental, cultural, and general economic benefits.

“External costs” means external diseconomies; costs to or negative impacts on the activities of entities outside the utility and its ratepayers. External costs include environmental, cultural, and general economic costs.

“Feed-in-Tariff” or “FIT” means a set of standardized terms and conditions, including published purchased power rates, which a utility shall pay for each type of renewable energy.

“Full cost” means the total cost of a program, system, or capability, including research and development costs, capital investment costs, and operating and maintenance costs.

“Hawai‘i Revised Statutes” or “HRS” means current State laws governing the State of Hawai‘i.

“Integrated Resource Plan” or “IRP” is a plan governed by this framework which provides mandatory guidelines for the utilities for meeting the utility’s forecasted load over time with supply-side and demand-side resources consistent with clean energy objectives.

“Investment costs” means the one-time costs beyond the development phase to introduce a new system, program, or capability into use. It includes capital investment costs, initial equipment acquisition costs, and initial education and training costs.

“Life cycle costs” means the total cost impact over the life of the program. Life cycle costs include research and development cost, investment cost (the one-time cost of instituting the program), and operating and maintenance (O&M) cost.

“Net Energy Metering” or “NEM” is a service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility (“customer-generator”) and delivered to the local distribution facilities that is used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.

“Operating and maintenance costs” or “O&M costs” means recurring costs of operating, supporting, and maintaining authorized programs, including costs for labor, fuel, materials and supplies, and other current expenses.

“Participant impact” means the impact on participants in a demand-side management program in terms of the costs borne and the direct, economic benefits received by the participants.

“Planning objectives” are desired outcomes to be attained by actions by the utility and Public Benefits Fee Administrator.

“Program” means projects, resources and/or activities in a strategy, scenario and/or the Action Plan.

“Public Benefit Fee Administrator” or “PBF Administrator” means the third-party administrator of energy efficiency demand-side management programs as defined in HRS ch. 269, pt. VII, § 269-122.

“Ratepayer impact” means the impact on ratepayer in terms of the utility rates that ratepayers must pay.

“Research and development costs” means costs associated with the development of a new system, program, or capability to the point where it is ready for introduction into operational use. It includes the costs of prototypes and the testing of the prototypes. It includes the costs of research, planning, and testing and evaluation.

“Renewable Portfolio Standards” or “RPS” means the State of Hawai‘i’s renewable portfolio standards as defined in HRS ch. 269, pt. V.

“Request for Proposals” or “RFP” means a written request for proposals issued by an electric utility or other entity to solicit bids from interested parties for provision of

supply-side or demand-side resources or services to a utility pursuant to an applicable competitive bidding process.

“Resource option” is a program, generation unit, tariff provision, or any other measure (collectively “measures”) that would contribute to meeting energy needs or attainment of planning objectives. Resource options would include measures that could be implemented by the utility, the public benefit fee administrator or the Commission as well as those measures anticipated to be implemented by other entities (such as State of Hawai‘i programmatic governmental agency efficiency measures).

“Scenario” is a distinctive set of possible, plausible circumstances that would have a major effect on resource planning decisions. Scenarios would be explicitly identified in the planning process in order to (a) provide an appropriate breadth to the scope of plausible analysis assumptions utilizing stakeholder participation, (b) frame meaningful planning objectives and measures of attainment and (c) test the “robustness” of candidate strategies with respect to a range of possible future circumstances. Scenarios could be formulated based on possible circumstances including those that are outside the control of the utilities and Commission and those that based on major “game changing” resource strategies (such as an inter-island cable system).

“Societal cost” means the total direct and indirect costs to society as a whole. Society includes the utility and, in a demand-side management program, the participants.

“Societal cost-benefit assessment” means an assessment of the costs and benefits to society as a whole.

“Strategy” is a set of perspective resources and actions that are designed to meet the planning objectives. A strategy is similar to what the HECO Companies have referred to as “candidate plans” in the IRP applications filed under the existing IRP Framework except that a strategy could also include appropriate contingency planning, parallel planning measures to address future uncertainties. In the planning process each strategy would be assessed with respect to the various identified scenarios. An action plan would be identified to implement a preferred strategy and/or to maintain flexibility to implement more than one possible preferred strategy or one or more contingency strategies.

“Supply-side programs” means programs designed to supply power either to the utility grid or to a particular customer or entity, including, but not limited to, renewable energy, CHP, and independent power producers.

“Total resource cost” means the total cost of a demand-side management program, including both the utility and participants’ costs.

“Utility” or “Public Utility” an organization that maintains the infrastructure for a public service (often also providing a service using that infrastructure). In the case of electrical service, the organization can be privately-owned, such as Hawaiian Electric Company, Inc., the Hawaii Electric Light Company, Inc., the Maui Electric Company, Ltd., or

publicly-owned such as a municipal, or member-owned such as a cooperative, as in the case for Kauai Island Utility Cooperative. Other public utilities can provide natural gas (or as in the case of The Gas Company, propane and synthetic gas), water or sewage services.

“Utility cost” means the cost to the utility (including ratepayers), excluding costs incurred by participants in a demand-side management program.

“Utility cost-benefit assessment” means an assessment of the costs and benefits to the utility.

II. INTRODUCTION

A. Goal of Integrated Resource Planning

The goal of integrated resource planning is to employ a comprehensive and flexible planning process to develop and implement integrated resource plans which shall govern utility acquisition and utilization of all capital projects, purchased power, and demand-side management toward achieving and exceeding Clean Energy Objectives (“CE Objectives”) in an efficient, economical, and prudent manner that promotes Hawai‘i as a leader in the adoption and use of clean energy and facilitates Hawai‘i’s swift transition to a clean energy future.

B. Governing Principles (Statements of Policy)

1. The development of integrated resource plans are the responsibility of each utility, in consultation with advisory group(s), non-utility stakeholders, and the public, and with the oversight and approval of the commission.
2. Integrated resource plans shall comport with federal, state, and county environmental, health, and safety laws and formally adopted state and county plans.
3. Integrated resource plans shall be developed upon consideration and analyses of the short- and long-term costs, benefits, and risks associated with all appropriate and feasible supply-side and demand-side distributed generation and energy management resources
4. Integrated resource plans shall consider technological advances in the utility’s transmission and distribution infrastructure plans such as advanced data acquisition and system controls (i.e., smart grid), energy storage, or changes in the utility’s operating procedure.
5. Integrated resource plans shall consider the plans’ impact on utility customers, environmental and cultural resources, the local economy, and the broader society.

6. Integrated resource plans shall take into consideration a utility's financial integrity, size, and physical capability.
7. Integrated resource planning shall be an open public process which shall maximize public involvement to enable mutual collaboration, communication, and feedback between the utility and non-utility stakeholders and the public and create broad-based awareness and support for achieving and exceeding CE Objectives.
8. A utility and intervenors are entitled to recover all appropriate and reasonable integrated resource planning costs as approved by the Commission.
9. Integrated resource plans shall prioritize and encourage the increased use of distributed generation over centralized fossil-based generation.
10. Integrated resource plans shall seek to achieve and exceed CE Objectives, including the economic and environmental benefits associated with achievement of energy independence.
11. Integrated resource plans shall take into consideration the need to prevent or minimize power outages during and after disaster situations.
12. Integrated resource planning shall be based upon and incorporate to the extent reasonable the successful elements of the planning process utilized by utilities and Independent System Operators working in conjunction with various stakeholders in other jurisdictions.
13. Integrated resource plans shall prioritize resource acquisition and integration such that demand-side management programs and renewable energy resources are first optimized before consideration is given to fossil-based resources.
14. No customer or third party shall be required to disclose confidential information during the collection of data for integrated resource planning-related proposals or programs.
15. Integrated resource plans shall address all technical barriers to achieving CE Objectives.

C. Utility's Responsibility

1. Each utility is responsible for developing and maintaining a plan or plans for meeting the energy needs of its customers.
2. The utility shall prepare and submit to the commission for commission review at the time or times specified by the commission the utility's integrated resource plan and action plan.

3. The utility shall maintain at all times a current and up-to-date resource analysis capability and respond to requests for information and analysis by the commission.
4. The utility shall maintain and make publicly available at all times a current and up-to-date action plan.
5. The utility shall maintain and make publically available at all times current and up-to-date information regarding its avoided costs, renewable energy and capacity wholesale purchase tariffs and all current, pending or planned resource acquisition tariffs, programs, requests for proposals or bid offerings.

D. Commission's Responsibility

1. The commission's responsibility, in general, is to review the utility's plans and planning assumptions and determine whether they represent a reasonable set of assumptions for evaluating capital projects, resource acquisition programs, contracts or other utility commitments for meeting the energy needs of the utility's customers and is in the public interest and consistent with the goals and objectives of integrated resource planning.
2. The commission will review the utility's integrated resource plan, its program implementation schedule, and its evaluations, and generally monitor the utility's implementation of its plan. Upon review, the commission may approve, reject, approve in part and reject in part or require modifications of the utility's integrated resource plan, action plan and planning assumptions.
3. The commission will require the provision of planning information and analysis by the utility as necessary at any time to provide context and information in any regulatory matters before the commission. The commission will decide at the time it requires any information or analysis the extent to which the integrated resource plan advisory group(s), parties and/or participants will be allowed to provide responses to the commissions request for information and/or comments regarding the utility's response(s).
4. The commission staff (or one or more commissioners) may preside over part of occasional advisory group meetings to invite and obtain comments and positions of advisory group members.
5. The commission may, as it finds necessary, issue orders to provide relief (i.e., require consideration by the utility of certain circumstances, resources or scenarios) recommended by advisory group members, parties or participants.

E. Consumer Advocate's Responsibility

1. The director of commerce and consume affairs, as the consumer advocate and through the division of consumer advocacy, has the statutory responsibility to represent, protect, and advance the interest of consumers of utility services. The consumer advocate, therefore, has the duty to ensure that the utility's integrated resource plan promotes the interest of utility consumers.
2. The consumer advocate shall be a party to each utility's integrated resource planning docket and a member of any and all advisory groups established by the utility in the development of its integrated resource plan. The consumer advocate shall also participate in all public hearings and other sessions held in furtherance of the utility's efforts in integrated resource planning.

F. Public Benefit Fee Administrator's Responsibility

1. The Public Benefit Fee Administrator (PBFA) is a contractor to the Commission and has a unique role as a provider of ratepayer funded energy services.
2. The energy efficiency programs managed by the PBFA serve purposes that are closely integrated with the services provided by the energy utilities. Together, the programs managed by the PBFA and the services provided by the energy utilities need to meet energy consumer needs reliably and economically. The PBFA programs serve as important components of utility plans, can serve as alternatives to or means to defer utility capital expenditures, and are relied upon by the utilities to meet energy service requirements. It is therefore necessary that utility planning include consideration of the optimal targeting, design objectives and role of the PBFA energy efficiency programs in the context of utility plans.
3. The specific design of the energy efficiency programs managed by the PBFA, however, must reside with the PBFA to the extent that the PBFA is responsible for the efficacy of these programs and to the extent specified by contract or otherwise determined by the commission.
4. The PBFA should be a participant in the utility planning process and should have a unique role as the primary implementer of a fundamental component of Hawai'i's energy utility resource strategy. The PBFA should provide information to the utility planning process regarding the nature of existing, planned and potentially feasible programs, the expected cost and impacts of these programs as well as any other relevant issues or uncertainties. The utility planning process should evaluate the existing, planned and potentially feasible energy efficiency programs to determine which are the most cost-effective in terms of avoiding short run and long

run utility costs, the extent to which these programs can meet utility and State planning objectives and how these programs might best be targeted geographically or temporally.

5. The PBFA and the utility shall cooperate interactively to determine an optimal portfolio of programs to be implemented by the PBFA.

III. THE PLANNING CONTEXT

A. Major Steps

There are four major steps in the integrated resource planning process: planning, programming, implementation, and evaluation.

1. Planning is that process in which the utility's needs are identified; the utility's objectives are formulated; measures by which effectiveness in attaining objectives are specified; the alternatives by which the objectives may be attained are identified; the full cost, effectiveness, and benefit implications of each alternative are determined; the assumptions, risks, and uncertainties are clarified; the cost, effectiveness, and benefit tradeoffs of the alternatives are made; the resource options are examined, screened and evaluated; and resource and program choices are subjected to sensitivity analyses. The product of this process is the utility's integrated resource plan. The planning horizon for utility integrated resource plans is 20 years.
2. Programming is that process by which the utility's long-range resource program plans are scheduled for implementation over a five to ten-year period. In this process, a determination is made as to the order in which the selected program options are to be implemented; the phases or steps in which each program is to be implemented; the expected target group and the annual size of the target group or annual level of penetration of demand-side management programs; the expected annual supply-side capacity additions; the expected annual levels of effectiveness in achieving integrated resource planning objectives; and the annual expenditures, by cost categories and cost elements, required to be made by the utility to support implementation of the programs. The result of this process is an action plan. The action plan represents an implementation strategy and timetable for program implementation. The action plan shall address utility actions for a five to ten year period.
3. Implementation is that process by which the resource program options to be implemented are acquired and instituted in accordance with the utility's program implementation schedule.
4. Evaluation is that process by which the results of the resource program options are measured in light of the utility's objectives. In this process the

actual costs, effectiveness, and benefits of the resource options and the attainment of the utility's objectives are measured against those that were projected in the planning and programming stages of the planning cycle.

B. The Planning Cycle

There are four main components of the integrated resource planning cycle:

1. Three Year Major Review. A major review of the utility twenty-year integrated resource plan, planning assumptions and action plan(s) each three years:
 - a. The commission will initiate each three year planning cycle by establishing one or more dockets to administer the planning process for each utility with a three-year cycle for major reviews.
 - (1) The commission shall establish one or more advisory groups for each utility and/or for several energy utilities collectively.
 - (2) The commission may establish one or more technical advisory groups or technical advisory committees within advisory groups to assist in monitoring, evaluating and interpreting the assumptions, modeling and analysis utilized in the preparation of the utility integrated resource plans and action plans.
 - b. At the beginning of each three-year IRP review cycle the commission may (independently or after a public meeting) specify:
 - (1) questions and issues that the specific round of IRP analysis and the resulting plan should address, and
 - (2) any specific objectives or scenarios that should be considered in that specific round of IRP analysis.
 - c. The three year planning cycle shall establish and review:
 - (1) planning assumptions (projected demand, fuel prices, resource characteristics), including identification of possible future scenarios to be considered in developing plans and action plans.
 - (2) analytical methods (integration modeling, rate impact analyses, etc), including methods to consider identified scenarios.
 - (3) a base long range (20 year) resource plan.

- (4) a five year (or longer) action plan.
- 2. Ongoing Analysis and Planning Capability.
 - a. Each utility would maintain a modeling and analysis capability that is current and up to date at all times.
 - (1) On an ongoing basis, the utility shall update all important planning assumptions, forecasts, demand estimates, etc. as frequently as circumstances require and configure the planning process analytical models accordingly.
 - (2) The utility shall notify the commission and shall notify and solicit comments to be forwarded to the commission from all planning docket parties and advisory group(s) whenever planning assumptions are updated.
 - b. As needed for any regulatory purposes, the commission will request prompt and timely analysis from the utilities based on current, up-to-date planning assumptions.
 - (1) In the context of any docket, the commission may issue information requests to the utility requesting information and/or analysis based on current planning assumptions and modeling analysis capability.
 - (2) Planning docket parties and utility advisory group members shall be notified of any requests for information or analysis and documents shall be made available via the Commission's Document Management System.
 - (3) The commission may, at its discretion, issue any information requests and/or responses by the utility to the planning docket parties or participants, the advisory group(s) or any technical advisory group(s) or committee(s) for review and comment.
- 3. Current Action Plan.
 - a. Each utility shall maintain a current, up-to-date action plan at all times.
 - (1) To the extent that circumstances or changes in planning assumptions substantially affect the merits of the base resource plan or action plan, the Commission, parties and advisory group shall be notified.

- (2) Action plans shall be updated in accordance with supporting analytical methods and with the informed advice of the parties and advisory group.
 - b. Modified (updated) action plans would be prospective pending any explicit approval of any action plan components by the commission but would always be kept up-to-date and publicly accessible to inform all stakeholders of current planning assumptions presumed by the utility.
 - (1) Actions proposed by the utility in any docket before the commission would be reviewed by the commission in light of the current, most recently approved action plan.
 - (2) If proposed actions are not consistent with the most recently approved action plan, the proposed actions must be consistent with the current updated action plan which should be reviewed by the commission prior to or concurrently with the commission's review of the proposed action with the informed advice of the planning docket parties and advisory group(s).
 - c. Any approval of modifications to the utility integrated resource plan or action plan in a docket that considers actions not consistent with the approved utility integrated resource plan or approved action plan shall be made with the informed advice of the planning docket parties and participants in the advisory group(s). The utility shall specify and, after opportunity for comment by the planning docket parties and participants in the advisory group(s), the commission shall determine:
 - (1) The extent to which any proposed actions are not consistent with the approved integrated resource plan and approved action plan.
 - (2) The extent to which any proposed actions would affect any other aspects of the approved integrated resource plan and approved action plan.
 - (3) Whether the proposed actions and resulting associated changes in the integrated resource plan and action plan are reasonable and in the public interest.
4. Evaluations.
- a. As required by the commission each utility shall provide evaluations of the implementation of integrated resource plans.

action plans and the attainment of planning objectives and statutory objectives.

C. The Docket

1. Each planning cycle for a utility will commence with the issuance of an order by the commission opening a docket for integrated resource planning.
2. The docket will be maintained throughout the planning cycle for the filing of documents, the resolution of procedural disputes and other purposes related to the utility's integrated resource plan.
3. Within 30 days after the opening of the docket or, if petitions to intervene are filed within twenty days of the opening docket, by a date specified by the commission, the utility and parties shall prepare, and file with the commission a proposed procedural order and procedural schedule for the development of the utility integrated resource plan and action plan.
 - a. The procedural schedule shall identify several stages of the planning process and specify dates, at each stage, for filings with the commission by the utility and parties and allowing filing of comments by participants in the advisory group(s). Stages shall include:
 - (1) Identification and determination of scenarios and planning assumptions.
 - (2) Identification and determination of analytical methods and models including methods to evaluate identified scenarios.
 - (3) Identification of candidate resource strategies to be evaluated.
 - (4) Proposed integrated resource plan(s) and action plan(s).
4. The utility shall complete its integrated resource plan and program implementation schedule within one year of the commencement of the planning cycle or according to a schedule approved by the commission.
5. Any party or advisory group member could petition the Commission at any time requesting the Commission's attention to review or take action regarding changes to planning assumptions or changes in action plans.
 - a. Parties or participants may request relief from the Commission by motion.

- b. Parties, participants or advisory group members may petition the commission for action regarding changes to planning assumptions, long range plans or action plans by an informally by letter. Any such requests will conform to the requirements in the commission's existing rules regarding informal complaints.

D. Submissions to the Commission

- 1. In each three year general review, the utility shall submit its integrated resource plan as follows.
 - a. The utility shall include in its integrated resource plan a full and detailed description of (1) the generation, major distribution, and transmission needs identified; (2) the forecasts made, including supply- and demand-side distributed generation forecasts; (3) the assumptions underlying the forecasts; (4) the objectives to be attained by the plan; (5) the measures by which achievement of the objectives is to be assessed; (6) the resource options or mix of options included in the plan; (7) the assumptions and the basis of the assumptions underlying the plan; (8) the risks and uncertainties associated with the plan; (9) the revenue requirements on a present value basis and on an annual basis; (10) the expected impact of the plan on demand; (11) the expected achievement of objectives; (12) the potential impact of the plan on rates and consumer bills, including any potential rate and billing impacts due to possible rate equalization measures between utility service territories, and consumer energy use; (13) the plan's external costs and benefits; and (14) the relative sensitivity of the plan to changes in assumptions and other conditions. The items enumerated should, where appropriate, be described for the plan as a whole and for each of the resources or mix of resources included in the plan.
 - b. The utility shall file with the integrated resource plan a full and detailed description of the analysis or analyses upon which the plan is based. The utility shall fully describe, among other things, (1) the data (and the source of the data) upon which needs were identified and forecasts made; (2) the methodologies used in forecasting; (3) the various objectives and measures of assessing attainment of objectives that were considered, but rejected, and the reasons or rejecting any objective or measure; (4) the resource options that were identified, but screened out and not considered and the reasons for the rejection of any resource option; (5) the assumptions and the basis of the assumptions, the risks and uncertainties, the costs, effectiveness, and benefits (including external costs and benefits) and the impacts on demand, rates, consumer bills, and consumer energy uses associated with each resource option or mix of options that was considered; (6) the

- comparisons and the cost, effectiveness, and benefit tradeoffs and optimization made of the options and mixes of options; (7) the models used in the comparisons, tradeoffs, and optimization; (8) the criteria used in any ranking of options and mixes of options; and (9) the sensitivity analyses conducted for the options and mixes of options.
- c. The utility shall also file with the integrated resource plan a description of all alternate plans that the utility developed, the ranking it accorded the various plans, the criteria used in such ranking, and a full and detailed explanation of the analysis upon which it decided its preferred integrated resource plan.
 - d. The submissions should be simply and clearly written and, to the extent possible, in non-technical language. Charts graphs, and other visual devices may be utilized to aid in understanding its plan and the analyses made by the utility. The utility shall provide an executive summary of the plan and of the analyses and appropriately index its submissions.
2. In each three year general review, the utility shall submit its action plan as follows.
- a. The utility shall include in the action plan by year: the programs or phases of programs to be implemented in the year; the expected level of achievement of objectives; the expected size of the target group or level of penetration of any demand-side management program; the expected supply-side capacity addition; the expenditures, by cost categories and cost elements, required to be made by the utility to support implementation of each program or phase of a program.
 - b. The utility shall file with its action plan a full and detailed description of the analysis upon which the schedule is based. The utility shall fully describe, among other things:
 - (1) The steps required to realize and implement the supply-side and demand-side resource programs included in the schedule.
 - (2) How the target groups were selected and how program penetration for demand-side management programs and the expected levels of effectiveness in achieving integrated resource planning objectives were derived.
 - (3) The expected annual effects of program implementation on the utility and its system, the ratepayers, the environment,

public health and safety, cultural interests, the state economy, and society in general.

- c. The program implementation schedule shall also be accompanied by the utility's proposals on cost and revenue loss recovery and incentives, as appropriate.
 - d. The utility shall include the expected transmission system additions and the estimated cost required to be made by the utility to support the implementation of the transmission additions.
 - e. The utility shall include the identification of the expected major distribution system additions.
 - f. The utility shall include identification of smart grid improvements and upgrades to the utility system and the estimated cost required to be made by the utility to support the implementation of any smart grid improvements.
3. The utility shall regularly update its action plan as circumstances require so as to always maintain a current and up-to-date action plan.
- a. The utility shall make, on an ongoing basis, an assessment of the continuing validity of the forecasts and assumptions upon which its integrated resource plan and its action plan were fashioned.
 - b. The utility shall also include for each program or phase of program included in the action plan current information as follows:
 - (1) The expenditures anticipated to be made and the expenditures actually made for each program or action identified in the action plan.
 - (2) The target group size or level of penetration anticipated for each demand-side management program and the size or level actually realized.
 - (3) The effects of program implementation anticipated and the effects actually experienced.
4. The utility may at any time, as a result of a change in conditions, circumstances, or assumptions, revise or amend its integrated resource plan or its action plan. Modified (updated) action plans would be prospective pending any explicit approval of any action plan components by the commission but would always be kept up-to-date and publicly accessible to inform all stakeholders of current planning assumptions presumed by the utility.

5. The integrated resource plan and action plan shall serve as the context and analytical basis for the regulation of all utility expenditure for capital projects, purchased power, and demand-side management programs. Notwithstanding approval of an integrated resource plan: (a) an expenditure for any capital project in excess of \$2,500,000 shall be submitted to the commission for review as provided in paragraph 2.3.g.2 of General Order No.7; and (b) no obligation under any purchased power contract shall be undertaken and no expenditure for any specific demand-side management or demand response program included in an integrated resource plan or action plan shall be made without prior commission approval. All power purchases from qualifying facilities and independent power producers shall be subject to statute and commission rules.
6. The commission, upon a showing that a utility has an ownership structure in which there is no substantial difference in economic interests between its owners and customers, may waive or exempt that utility from any or all provisions of this framework, as appropriate.

E. Public Participation

To maximize public participation in each utility's integrated resource planning process, opportunities for such participation shall be provided through advisory groups to the utility, public hearings, and interventions in formal proceedings before the commission.

1. Advisory groups
 - a. The commission shall organize a group or groups of representatives of public and private entities to provide independent review and input to each utility and the commission in the integrated resource planning process. Different advisory groups or committees within an advisory group may be formed for different issues related to the planning process, as appropriate.
 - b. An independent facilitator appointed by the commission shall chair each advisory group. The costs of the independent facilitator shall be paid for by the utility, subject to recovery as part of its costs of integrated resource planning. The commission, by its staff or one or more commissioners, may participate in advisory group meetings to receive input from advisory group members.
 - c. The membership of each advisory group shall be independent of any utility and be able to provide significant perspective or useful expertise in the development of the utility's integrated resource plan. The commission shall establish the membership of each advisory group as follows:

- (1) Governmental members of each advisory group shall include, at minimum, the Consumer Advocate or the Consumer Advocate's designee, the director of the State of Hawai'i Department of Business, Economic Development & Tourism or the director's designee, and the mayor of the county in which the utility in question provides service or conducts utility business or the mayor's designee.
 - (2) Nongovernmental members shall include representatives of environmental, cultural, business, consumer, and community interests, and individuals with useful expertise in each county in which the utility provides service or conducts utility business.
 - (3) Parties admitted into the integrated resource planning docket shall be allowed to participate as advisory group members, as the commission deems appropriate.
 - (4) Each advisory group shall be representative of as broad a spectrum of interests as possible, subject to the limitation that the interests represented should not be so numerous as to make deliberations as a group unwieldy.
- d. Each advisory group shall hold meetings during key phases of a utility's integrated resource planning process, with a minimum of quarterly meetings and more frequent meetings to the extent meaningful and practical.
 - e. If a utility is considering the use of an energy resource located in another utility's service territory, then that utility shall confer with the advisory group representing the service territory of the energy resource under consideration.
 - f. Each utility shall provide all data reasonably necessary for an advisory group to participate in that utility's integrated resource planning process, subject to the need to protect the confidentiality of customer-specific and proprietary information, provided that such customer-specific and proprietary information shall not be withheld where there are mechanisms to protect confidentiality.
 - g. An advisory group participating in a utility's integrated resource planning process, or qualified person(s) representing the advisory group, shall be permitted to inspect and evaluate that utility's modeling, including but not limited to reviewing the inputs the utility has used for the modeling.
 - h. Upon request from an advisory group, the Consumer Advocate, the State of Hawai'i Department of Business, Economic Development

& Tourism, or a county represented in the advisory group, the utility shall use its modeling tools to run alternative scenarios based on alternate assumptions. At the utility's request, the commission may limit requests that are unduly repetitious or burdensome.

- i. The Public Benefits Fee Administrator shall provide all data reasonably necessary for an advisory group to participate in developing and evaluating forecasts of energy efficiency programs.
 - j. The use by the advisory groups of the collaborative process is encouraged to arrive at a consensus regarding recommendations or findings on issues. If consensus is not possible, recommendations or findings of an advisory group may be made by the vote of not less than the majority of the entire membership of that advisory group.
 - k. If a utility does not follow a recommendation or finding of an advisory group, it must provide to the advisory group and file with the commission a detailed justification why the recommendation or finding should not be adopted. The advisory group and/or its members shall have an opportunity to respond to the filing.
 - l. At any point during the integrated resource planning process, an advisory group or one or more of its members may request interim relief from the commission to resolve a significant dispute with the utility in the implementation of the planning process. Such a request will be handled as an informal complaint under the commission's rules.
 - m. All reasonable out-of-pocket costs incurred by the members of the advisory groups (other than governmental agencies) participating in a utility's integrated resource planning process shall be paid for by that utility, subject to recovery as part of that utility's cost of integrated resource planning.
2. Public input
- a. Each utility is encouraged to conduct public meetings or provide public forums at the various, discrete phases of the planning process for the purpose of securing public input.
 - b. Prior to filing a request for approval of an integrated resource plan, each utility shall provide an opportunity for public review and comment on the proposed plan during a period of not less than sixty (60) days. During each such public comment period, the utility shall hold at least one public hearing on each island that would be affected by the proposed integrated resource plan at

which the public will have the chance to ask questions, seek clarification, raise concerns, and make comments and suggestions.

- c. Each utility preparing an integrated resource plan shall assess and consider comments received during the public review and comment period and shall respond by one or more of the means listed below, stating its response in the request for approval filed with the commission:
 - (1) Modify the plan;
 - (2) Develop and evaluate alternatives not previously given serious consideration by the utility;
 - (3) Supplement, improve, or modify its analysis;
 - (4) Make factual corrections; and/or
 - (5) Explain why the comments do not warrant further response, citing the sources, authorities, or reasons that support the utility's position and, if appropriate, indicate those circumstances that would trigger utility reappraisal or further response.
- d. Upon the filing of requests for approval of an integrated resource plan, the commission may, and it shall where required by statute, conduct public hearings for the purpose of securing additional public input on the utility's proposal. The commission may also conduct such informal public meetings as it deems advisable.

3. Intervention

- a. Upon the filing of its integrated resource plan, the utility shall cause to be published in a newspaper of general circulation in the State a notice informing the general public that the utility has filed its proposed integrated resource plan with the commission for the commission's approval. The commission and the utility shall also post such public notice online on their respective websites.
- b. To encourage public awareness of the filing of a proposed utility plan, a copy of the proposed plan and the supporting analysis shall be available for public review at the commission's office and at the office of the commission's representative in the county serviced by the utility. The commission and the utility shall provide electronic copies of these documents online on their respective websites. Each utility shall note the availability of the documents for public review at these locations in its published notice. The utility shall make copies of the executive summary of the plan and the analysis

available to the general public at no cost, except the cost of duplication.

- c. Applications to intervene or to participate without intervention in any proceeding in which a utility seeks commission approval of its integrated resource plan are subject to the rules prescribed in part IV of the commission's General Order No.1 (Practice and Procedure before the Public Utilities Commission); except that such applications may be filed with the commission not later than 20 days after the publication by the utility of a notice informing the general public of the filing of the utility's application for commission approval of its integrated resource plan, notwithstanding the opening of the docket before such publication.
- d. A person's status as an intervenor or participant shall continue through the life of the docket, unless the person voluntarily withdraws or is dismissed as an intervenor or participant by the commission for cause.

4. Intervenor funding

- a. Upon the issuance of the commission's final order on a utility's integrated resource plan or any amendment to the plan, the commission may grant an intervenor or participant (other than a governmental agency, a for-profit entity, and an association of for-profit entities) recovery of all or part of the intervenor's or participant's direct out-of-pocket costs reasonably and necessarily incurred in intervention or participation. Any recovery and the amount of such recovery are in the sole discretion of the commission.
- b. To be eligible for such recovery:
 - (1) The intervenor or participant must show a need for financial assistance;
 - (2) The intervenor or participant must maintain accurate and meaningful books of account on the expenditures incurred; and
 - (3) The commission must find that the intervenor or participant made a substantial contribution in assisting the commission in arriving at its decision.
- c. The intervenor's or participant's books of account are subject to audit, and the commission may impose other requirements in any specific case.

- d. Such recovery may be provided upon the application of the intervenor or participant within 30 days after the issuance of the commission's final order (or the entry of a settlement between the parties), together with justification and documented proof of the costs incurred.
- e. The commission may provide for recovery via periodic installments during the course of a proceeding. To be eligible for this option, the intervenor or participant shall file a notice of intent to seek recovery and an estimated budget within 30 days after being granted intervention or participation. The intervenor or participant may thereafter make periodic applications for recovery during the proceeding, within the final deadline specified above. The intervenor or participant may request to revise the estimated budget as appropriate.
- f. The costs of intervenor funding shall be paid for by the utility, subject to recovery as part of its costs of integrated resource planning.

IV. PLANNING CONSIDERATIONS

A. Scenarios

Each utility, in consultation with advisory group(s), shall develop scenarios to guide integrated resource planning, including but not limited to possible assumptions, regarding future demand, the availability, characteristics and costs of resource options, and other principal factors that would affect the determination of prudent integrated resource plans. Scenarios may be based on circumstances outside the control of the utilities and commission (e.g., major increases in oil prices) or within their control (e.g., a major resource strategy). A sufficient number and range of scenarios should be developed to (1) incorporate a broad range of perspectives and input from non-utility stakeholders and the public; (2) provide meaningful breadth to the scope of analysis and assumptions; (3) frame meaningful planning objectives and measures of attainment; and (4) test the robustness of candidate strategies with respect to a range of possible future circumstances and risks.

B. Forecasts

Forecasts shall be conducted with respect to each scenario to inform the development of each utility's integrated resource plan.

1. Demand

- a. The utility, in consultation with advisory group(s), shall develop a range of forecasts of the amount of energy demand over the planning horizon.

- b. Each forecast shall identify the significant demand and use determinants; describe the data, the sources of the data, the assumptions (including assumptions about fuel prices, energy prices, economic conditions, demographics, population growth, technological improvements, and end-use), and the analysis upon which the forecast is based; indicate the relative sensitivity of the forecast result to changes in assumptions and varying conditions; and describe the procedures, methodologies, and models used in the forecast, together with the rationale underlying the use of such procedures, methodologies, and models.
 - c. Among the data to be considered are historical data on energy sales, peak demand, system load factor, system peaks, and such other data of sufficient duration to provide a reasonable basis for the utility's estimates of future demand.
 - d. As feasible and appropriate, the forecast shall be by the system as a whole and by customer classes.
2. Demand-Side Management
- a. Energy Efficiency: The PBFA shall work with each utility and advisory group(s) to develop a range of forecasts of the potential development of energy efficiency programs over the planning horizon.
 - b. Load management: Each utility shall work with the PBFA and advisory group(s) to develop a range of forecasts of the potential development of demand response and load management programs, including rate and fee design measures, over the planning horizon.
3. Distributed Generation
- Each utility shall work with advisory group(s) to develop a range of forecasts of the amount of distributed generation development and penetration via NEM, FIT, and other means.

C. Objectives

- 1. The ultimate objective of each utility's integrated resource plan is to achieve and exceed Clean Energy Objectives in meeting the energy needs of the utility's customers over the ensuing 20 years.
- 2. Each utility, in consultation with advisory group(s), shall identify a meaningful set of planning objectives for its integrated resource plan and shall identify more specific, shorter-term objectives for its action plans to facilitate achievement the objectives of the integrated resource plan and provide benchmarks to measure progress.

3. The commission may specify objectives for the integrated resource plan or action plans.
4. An advisory group may recommend objectives for the integrated resource plan or action plans to the utility or the commission.

D. Effectiveness Measures

1. The integrated resource plan and action plans shall specify the measures by which attainment of the objective or objectives is to be determined.
2. Where direct, quantifiable measures are not available, proxy measures may be used.

E. Resource Options

1. In the development of its integrated resource plan, the utility shall consider all feasible supply-side and demand-side resource options appropriate to Hawai'i and available within the years encompassed by the integrated resource planning horizon to meet the stated objectives.
2. The utility shall include among the options the supply-side and demand-side resources or mixes of options currently in use, promoted, planned, or programmed for implementation, as well as potential or planned retirements of existing resources in favor of clean energy resources. Supply-side and demand-side resource options include those resources that are or may be supplied by persons other than the utility.
3. The utility shall initially identify all possible supply-side and demand-side resource options. The utility may, upon review and consultation with advisory group(s), screen out those options that are clearly infeasible. The utility, in consultation with advisory group(s), may establish criteria for screening out clearly infeasible options.

F. Data Collection

1. For each feasible resource option, the utility shall determine its life cycle costs and benefits and its potential level of achievement of objectives. The utility shall identify the option's total costs and benefits--the costs to the utility and its ratepayers and the indirect, including external (spillover) costs and benefits. External costs and benefits include the cost and benefit impact on the environment, people's lifestyle and culture, and the State's economy.
2. To the extent helpful in analysis, the utility shall distinguish between fixed costs and variable costs and between sunk costs and incremental costs; and the utility shall identify any opportunity costs.

3. The costs and benefits shall, to the extent possible and feasible, be (a) quantified and (b) expressed in dollar terms. When it is neither possible nor feasible to quantify any cost or benefit, such cost or benefit shall be qualitatively measured. The methodology used in quantifying or in qualitatively stating costs and benefits shall be detailed.

G. Assumptions; Risks; Uncertainties

1. The utility shall identify the assumptions underlying any resource option or the cost or benefit of any option or any analysis performed.
2. The utility shall also identify the risks and uncertainties associated with each resource option.
3. The utility shall further identify any technological limitations, infrastructural constraints, legal and governmental policy requirements, and other constraints that impact on any option or the utility's analysis.

H. Models

1. The utility may utilize one or more generally accepted planning models or methodologies in comparing resource options and otherwise in analyzing the relative values of the various options or combinations of options.
2. Each model or methodology used must be fully described, documented, and explained in terms that a layperson can understand.

I. Analyses

1. The utility shall conduct analyses to compare and weigh the various options and various alternative mixes of options. Alternative mixes of options include variously integrated supply-side and demand-side management programs.
2. The utility shall conduct such analyses from varying perspectives, including, as appropriate, the utility cost-benefit perspective, the ratepayer impact perspective, the participant impact perspective, the total resource cost perspective, and the societal cost-benefit perspective.
3. The utility shall analyze all options on a consistent and comparable basis. It shall give the costs, effectiveness, and benefits of demand-side management options consideration equal to that given to the costs, effectiveness, and benefits of supply-side options. The utility may use any reasonable and appropriate means to assure that such equal consideration is given.
4. The utility shall compare the options on the present value basis. For this purpose, the utility shall discount the estimated annual costs (and benefits,

as appropriate) at an appropriate rate. The utility shall fully explain the rationale for its choice of the discount rate.

5. The utility shall prioritize the various options and mixes of options based on the goal and principles set forth in Part II.A & B. supra, and upon such reasonable additional criteria as it may establish in consultation with advisory group(s).

J. Resource Optimization

1. The utility, in consultation with advisory group(s), shall develop a number of alternative strategies to meet the planning objectives. Strategies may be based on any of various themes, including addressing specific scenarios or featuring specific resource options. A sufficient spectrum of strategies should be developed and analyzed to consider the scope of the identified plausible resource options and planning scenarios.
2. Based on its analyses, the utility, in consultation with advisory group(s), shall select those resource options or strategies that best achieve the planning objectives considered across the range of scenarios.
 - a. The options or strategies shall be selected in a fashion as to achieve an integration of supply-side and demand-side options.
 - b. The selection of options or strategies constitutes the utility's integrated resource plan.
3. For each strategy, the utility shall identify the revenue requirements on a present value and annual basis. It shall note the risks and uncertainties and describe the strategy's impact on rates, customer energy use, customer bills, and the utility system. It shall also describe the strategy's impact on external elements--the environment, people's lifestyle and culture, the State's economy, and society in general.
4. The utility shall rank the various strategies, based on such criteria as it may establish in consultation with advisory group(s). The utility shall designate one or some combination of these strategies as its preferred plan and submit to the commission the preferred plan as its proposed integrated resource plan, along with the alternative plans. It is recognized that the proposed integrated resource plan may not be the least expensive strategy and may include resource options and/or contingency measures to reasonably attain the planning objectives in light of uncertainty regarding the planning scenarios.

K. Sensitivity Analysis

The utility shall subject its selection of resource options to sensitivity analysis by altering assumptions and other parameters.

PUBLIC UTILITIES COMMISSION

STATE OF ~~HAWAII~~HAWAI'I

A FRAMEWORK FOR INTEGRATED RESOURCE PLANNING

March 9, 1992 , 2010

I. DEFINITIONS

Unless otherwise clear from the context, as used in this framework:

“Action” (as used in the context of a utility action plan) means any specific activity (resource option, study, program, measure, etc.) that the utility intends to implement in order to provide required services and/or attain planning objectives.

“Action plan” means a program implementation schedule, as part of a utility’s integrated resource plan, representing a strategy, including a timetable of programs, projects, and activities designed to meet energy objectives over the first five to ten year period of the 20-year planning horizon, including the State of Hawai’i’s clean energy objectives.

“Capital investment costs” means costs associated with capital improvements, including planning, the acquisition and development of land, the design and construction of new facilities, the making of renovations or additions to existing facilities, the construction of built-in equipment, and consultant and staff services in planning, design, and construction. Capital investment costs for a program are the sum of the program’s capital improvement project costs.

“CHP” means the production of useful heat and electricity from the same process or source.

“Clean energy” means electrical energy generated using renewable energy as a source or as electrical energy savings brought about by the use of renewable displacement or off-set technologies or energy efficiency technologies as defined as “renewable electrical energy” in HRS ch. 269, pt. V, § 269-91, as amended.

“Clean Energy Objectives” or “CE Objectives” means moving the State of Hawai’i off of fossil fuel use and on to Clean Energy use, as mandated by federal, State and county laws (including, but not limited to, HRS ch. 269, pt. V, as amended), and as may be informed by policy statements and guidance.

“Costs” means the full and life cycle costs of a resource option.

“Cost categories” means the major types of costs and includes research and development costs, investment costs, and operating and maintenance costs.

“Cost elements” means the major subdivision of a cost category. For the category “investment costs,” it includes capital investment costs, initial equipment and furnishing costs, and initial education and training costs. For the categories “research and development costs” and “operating and maintenance costs,” it includes labor costs, fuel costs, materials and supplies costs, and other current expenses.

~~“Demand-side management programs” or “DSM” means program programs designed to influence utility customer uses of energy to produce desired changes in electricity demand. It includes, including, but not limited to, conservation, load management, and efficiency resource programs: energy efficiency, demand response, load management, rate and fee design measures (e.g., declining block rate designs, generation hook-up fees, and standby charges), and renewable substitution.~~

“Design costs” means the costs related to the preparation of architectural drawings for capital improvements, from schematics to final construction drawings.

“Distributed Generation” or “DG” means electric generating technologies installed at, or in close proximity to, the end-user’s location including, but not limited to, renewable energy and combined heat and power (“CHP”) facilities, and dispatchable emergency generators.

“Effectiveness measure” means the criterion for measuring the degree to which the objective sought is attained.

“External benefits” means external economies; benefits to or positive impacts on the activities of entities outside the utility and its ratepayers. External benefits include environmental, cultural, and general economic benefits.

“External costs” means external diseconomies; costs to or negative impacts on the activities of entities outside the utility and its ratepayers. External costs include environmental, cultural, and general economic costs.

“Feed-in-Tariff” or “FIT” means a set of standardized terms and conditions, including published purchased power rates, which a utility shall pay for each type of renewable energy.

“Full cost” means the total cost of a program, system, or capability, including research and development costs, capital investment costs, and operating and maintenance costs.

“Hawai’i Revised Statutes” or “HRS” means current State laws governing the State of Hawai’i.

“Integrated Resource Plan” or “IRP” is a plan governed by this framework which provides mandatory guidelines for the utilities for meeting the utility’s forecasted load over time with supply-side and demand-side resources consistent with clean energy objectives.

“Investment costs” means the one-time costs beyond the development phase to introduce a new system, program, or capability into use. It includes capital investment costs, initial equipment acquisition costs, and initial education and training costs.

“Life cycle costs” means the total cost impact over the life of the program. Life cycle costs include research and development cost, investment cost (the one-time cost of instituting the program), and operating and maintenance (O&M) cost.

~~“Objective” means a statement of the end result, product, or condition desired, for the accomplishment of which a course of action is taken.~~

“Net Energy Metering” or “NEM” is a service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility (“customer-generator”) and delivered to the local distribution facilities that is used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.

“Operating and maintenance costs” or “O&M costs” means recurring costs of operating, supporting, and maintaining authorized programs, including costs for labor, fuel, materials and supplies, and other current expenses.

“Participant impact” means the impact on participants in a demand-side management program in terms of the costs borne and the direct economic benefits received by the participants.

“Planning objectives” are desired outcomes to be attained by actions by the utility and Public Benefits Fee Administrator.

~~“Program” means a combination of projects, resources and/or activities designed to achieve an objective or objectives in a strategy, scenario and/or the Action Plan.~~

~~“Program size” means the magnitude of a program, such as the number of persons serviced by the program, the amount of a commodity, the time delays, the volume of service in relation to population or area, etc.~~

~~“Program size indicator” means a measure to indicate the magnitude of a program.~~

“Public Benefit Fee Administrator” or “PBF Administrator” means the third-party administrator of energy efficiency demand-side management programs as defined in HRS ch. 269, pt. VII, § 269-122.

“Ratepayer impact” means the impact on ratepayer in terms of the utility rates that ratepayers must pay.

“Research and development costs” means costs associated with the development of a new system, program, or capability to the point where it is ready for introduction into

operational use. It includes the costs of prototypes and the testing of the prototypes. It includes the costs of research, planning, and testing and evaluation.

“Renewable Portfolio Standards” or “RPS” means the State of Hawai‘i’s renewable portfolio standards as defined in HRS ch. 269, pt. V.

“Request for Proposals” or “RFP” means a written request for proposals issued by an electric utility or other entity to solicit bids from interested parties for provision of supply-side or demand-side resources or services to a utility pursuant to an applicable competitive bidding process.

“Resource option” is a program, generation unit, tariff provision, or any other measure (collectively “measures”) that would contribute to meeting energy needs or attainment of planning objectives. Resource options would include measures that could be implemented by the utility, the public benefit fee administrator or the Commission as well as those measures anticipated to be implemented by other entities (such as State of Hawai‘i programmatic governmental agency efficiency measures).

“Scenario” is a distinctive set of possible, plausible circumstances that would have a major effect on resource planning decisions. Scenarios would be explicitly identified in the planning process in order to (a) provide an appropriate breadth to the scope of plausible analysis assumptions utilizing stakeholder participation, (b) frame meaningful planning objectives and measures of attainment and (c) test the “robustness” of candidate strategies with respect to a range of possible future circumstances. Scenarios could be formulated based on possible circumstances including those that are outside the control of the utilities and Commission and those that based on major “game changing” resource strategies (such as an inter-island cable system).

“Societal cost” means the total direct and indirect costs to society as a whole. Society includes the utility and, in a demand-side management program, the participants.

“Societal cost-benefit assessment” means an assessment of the costs and benefits to society as a whole.

“Strategy” is a set of perspective resources and actions that are designed to meet the planning objectives. A strategy is similar to what the HECO Companies have referred to as “candidate plans” in the IRP applications filed under the existing IRP Framework except that a strategy could also include appropriate contingency planning, parallel planning measures to address future uncertainties. In the planning process each strategy would be assessed with respect to the various identified scenarios. An action plan would be identified to implement a preferred strategy and/or to maintain flexibility to implement more than one possible preferred strategy or one or more contingency strategies.

“Supply-side programs” means programs designed to supply power. It includes either to the utility grid or to a particular customer or entity, including, but not limited to, renewable energy, CHP, and independent power producers.

“Total resource cost” means the total cost of a demand-side management program, including both the utility and participants’ costs.

“Utility” or “Public Utility” an organization that maintains the infrastructure for a public service (often also providing a service using that infrastructure). In the case of electrical service, the organization can be privately-owned, such as Hawaiian Electric Company, Inc., the Hawaii Electric Light Company, Inc., the Maui Electric Company, Ltd., or publicly-owned such as a municipal, or member-owned such as a cooperative, as in the case for Kauai Island Utility Cooperative. Other public utilities can provide natural gas (or as in the case of The Gas Company, propane and synthetic gas), water or sewage services.

“Utility cost” means the cost to the utility (including ratepayers), excluding costs incurred by participants in a demand-side management program.

“Utility cost-benefit assessment” means an assessment of the costs and benefits to the utility.

II. INTRODUCTION

A. Goal of Integrated Resource Planning

The goal of integrated resource planning is the identification of the resources or the mix of resources for meeting near and long term consumer energy needs in an efficient and reliable manner at the lowest reasonable cost to employ a comprehensive and flexible planning process to develop and implement integrated resource plans which shall govern utility acquisition and utilization of all capital projects, purchased power, and demand-side management toward achieving and exceeding Clean Energy Objectives (“CE Objectives”) in an efficient, economical, and prudent manner that promotes Hawai‘i as a leader in the adoption and use of clean energy and facilitates Hawai‘i’s swift transition to a clean energy future.

B. Governing Principles (Statements of Policy)

1. The development of integrated resource plans is the responsibility of each utility in consultation with advisory group(s), non-utility stakeholders, and the public, and with the oversight and approval of the commission.
2. Integrated resource plans shall comport with federal, state, and county environmental, health, and safety laws and formally adopted state and county plans.
3. Integrated resource plans shall be developed upon consideration and analyses of the short- and long-term costs, effectiveness, and benefits of,

- and risks associated with all appropriate, available, and feasible supply-side and demand-side options, distributed generation and energy management resources
4. Integrated resource plans shall ~~give consideration to the plans' impacts upon the utility's consumers, the environment, culture, community lifestyles, the State's economy, and society~~ consider technological advances in the utility's transmission and distribution infrastructure plans such as advanced data acquisition and system controls (i.e., smart grid), energy storage, or changes in the utility's operating procedure.
 5. Integrated resource plans shall consider the plans' impact on utility customers, environmental and cultural resources, the local economy, and the broader society.
 6. ~~5-~~Integrated resource plans shall take into consideration the utility's financial integrity, size, and physical capability.
 7. ~~6-~~Integrated resource planning shall be an open public process. Opportunities shall be provided for participation by the public and governmental agencies in the development and in commission review of integrated resource plans, which shall maximize public involvement to enable mutual collaboration, communication, and feedback between the utility and non-utility stakeholders and the public and create broad-based awareness and support for achieving and exceeding CE Objectives.
 8. ~~7-~~The A utility ~~is and~~ intervenors are entitled to recover all appropriate and reasonable integrated resource planning and implementation costs. In addition, existing disincentives should be removed and, as appropriate, incentives should be established to encourage and reward aggressive utility pursuit of demand-side management programs. Incentive mechanisms should be structured so that investments in suitable and effective demand-side management programs are at least as attractive to the utility as investments in supply-side options, costs as approved by the Commission.
 9. Integrated resource plans shall prioritize and encourage the increased use of distributed generation over centralized fossil-based generation.
 10. Integrated resource plans shall seek to achieve and exceed CE Objectives, including the economic and environmental benefits associated with achievement of energy independence.
 11. Integrated resource plans shall take into consideration the need to prevent or minimize power outages during and after disaster situations.
 12. Integrated resource planning shall be based upon and incorporate to the extent reasonable the successful elements of the planning process utilized

by utilities and Independent System Operators working in conjunction with various stakeholders in other jurisdictions.

13. Integrated resource plans shall prioritize resource acquisition and integration such that demand-side management programs and renewable energy resources are first optimized before consideration is given to fossil-based resources.
14. No customer or third party shall be required to disclose confidential information during the collection of data for integrated resource planning-related proposals or programs.
15. Integrated resource plans shall address all technical barriers to achieving CE Objectives.

C. Utility's Responsibility

1. Each utility is responsible for developing and maintaining a plan or plans for meeting the energy needs of its customers.
2. The utility shall prepare and submit to the commission for commission approval review at the time or times specified ~~in this framework by the commission~~ the utility's integrated resource plan and ~~program implementation schedule~~ action plan.
3. The utility shall ~~execute~~ maintain at all times a current and up-to-date resource analysis capability and respond to requests for information and analysis by the commission-approved plan in accordance with the program implementation schedule.
4. ~~The utility shall annually examine and evaluate its achievements in attaining its objectives. The utility shall maintain and make publicly available at all times a current and up-to-date action plan.~~
5. The utility shall maintain and make publically available at all times current and up-to-date information regarding its avoided costs, renewable energy and capacity wholesale purchase tariffs and all current, pending or planned resource acquisition tariffs, programs, requests for proposals or bid offerings.

D. Commission's Responsibility

1. The commission's responsibility, in general, is to review the utility's plans and planning assumptions and determine whether the utility's plan represents a reasonable course they represent a reasonable set of assumptions for evaluating capital projects, resource acquisition programs, contracts or other utility commitments for meeting the energy needs of the

utility's customers and is in the public interest and consistent with the goals and objectives of integrated resource planning.

2. ~~Specifically, the~~The commission will review the utility's integrated resource plan, its program implementation schedule, and its evaluations, and generally monitor the utility's implementation of its plan. Upon review, the commission may approve, reject, approve in part and reject in part, or require modifications of the utility's integrated resource plan ~~and program implementation schedule,~~action plan and planning assumptions.
3. ~~The parties shall cooperate in expediting commission hearings on the utility's~~commission will require the provision of planning information and analysis by the utility as necessary at any time to provide context and information in any regulatory matters before the commission. The commission will decide at the time it requires any information or analysis the extent to which the integrated resource plan and program implementation schedule. To the extent possible, the commission will hear the utility's application for approval of its integrated resource plan within six months of the plan's filing, and the commission will render its decision shortly thereafter.~~advisory group(s), parties and/or participants will be allowed to provide responses to the commissions request for information and/or comments regarding the utility's response(s).~~
4. The commission staff (or one or more commissioners) may preside over part of occasional advisory group meetings to invite and obtain comments and positions of advisory group members.
5. The commission may, as it finds necessary, issue orders to provide relief (i.e., require consideration by the utility of certain circumstances, resources or scenarios) recommended by advisory group members, parties or participants.

E. Consumer Advocate's Responsibility

1. The director of commerce and consume affairs, as the consumer advocate and through the division of consumer advocacy, has the statutory responsibility to represent, protect, and advance the interest of consumers of utility services. The consumer advocate, therefore, has the duty to ensure that the utility's integrated resource plan promotes the interest of utility consumers.
2. The consumer advocate shall be a party to each utility's integrated resource planning docket and a member of any and all advisory groups established by the utility in the development of its integrated resource plan. The consumer advocate shall also participate in all public

~~hearing~~hearings and other sessions held in furtherance of the utility's efforts in integrated resource planning.

E. Public Benefit Fee Administrator's Responsibility

1. The Public Benefit Fee Administrator (PBFA) is a contractor to the Commission and has a unique role as a provider of ratepayer funded energy services.
2. The energy efficiency programs managed by the PBFA serve purposes that are closely integrated with the services provided by the energy utilities. Together, the programs managed by the PBFA and the services provided by the energy utilities need to meet energy consumer needs reliably and economically. The PBFA programs serve as important components of utility plans, can serve as alternatives to or means to defer utility capital expenditures, and are relied upon by the utilities to meet energy service requirements. It is therefore necessary that utility planning include consideration of the optimal targeting, design objectives and role of the PBFA energy efficiency programs in the context of utility plans.
3. The specific design of the energy efficiency programs managed by the PBFA, however, must reside with the PBFA to the extent that the PBFA is responsible for the efficacy of these programs and to the extent specified by contract or otherwise determined by the commission.
4. The PBFA should be a participant in the utility planning process and should have a unique role as the primary implementer of a fundamental component of Hawai'i's energy utility resource strategy. The PBFA should provide information to the utility planning process regarding the nature of existing, planned and potentially feasible programs, the expected cost and impacts of these programs as well as any other relevant issues or uncertainties. The utility planning process should evaluate the existing, planned and potentially feasible energy efficiency programs to determine which are the most cost-effective in terms of avoiding short run and long run utility costs, the extent to which these programs can meet utility and State planning objectives and how these programs might best be targeted geographically or temporally.
5. The PBFA and the utility shall cooperate interactively to determine an optimal portfolio of programs to be implemented by the PBFA.

III. THE PLANNING CONTEXT

A. Major Steps

There are four major steps in the integrated resource planning process: planning, programming, implementation, and evaluation.

1. Planning is that process in which the utility's needs are identified; the utility's objectives are formulated; measures by which effectiveness in attaining objectives are specified; the alternatives by which the objectives may be attained are identified; the full cost, effectiveness, and benefit implications of each alternative are determined; the assumptions, risks, and uncertainties are clarified; the cost, effectiveness, and benefit tradeoffs of the alternatives are made; the resource options are ~~chosen~~ examined, screened and evaluated; and resource and program choices are subjected to sensitivity analyses. The product of this process is the utility's integrated resource plan. The planning horizon for utility integrated resource plans is 20 years. ~~Unless otherwise ordered by the commission, the 20-year period begins on January 1 following the completion of the plan.~~
2. Programming is that process by which the utility's long-range resource program plans are scheduled for implementation over a five to ten-year period. In this process, a determination is made as to the order in which the selected program options are to be implemented; the phases or steps in which each program is to be implemented; the expected target group and the annual size of the target group or annual level of penetration of demand-side management programs; the expected annual supply-side capacity additions; the expected annual levels of effectiveness in achieving integrated resource planning objectives; and the annual expenditures, by cost categories and cost elements, required to be made by the utility to support implementation of the programs. The result of this process is a program implementation schedule or an action plan. The schedule action plan represents an implementation strategy ~~or~~ and timetable for program implementation. The action plan shall address utility actions for a five to ten year period.
3. Implementation is that process by which the resource program options to be implemented are acquired and instituted in accordance with the utility's program implementation schedule.
4. Evaluation is that process by which the results of the resource program options are measured in light of the utility's objectives. In this process the actual costs, effectiveness, and benefits of the resource options and the attainment of the utility's objectives are measured against those that were projected in the planning and programming stages of the planning cycle.

B. The Planning Cycle

There are four main components of the integrated resource planning cycle:

1. ~~Each Three Year Major Review. A major review of the utility shall complete its initial twenty-year integrated resource plan and~~

~~implementation schedule and submit them for commission approval by the following dates, planning assumptions and action plan(s) each three years:~~

- a. ~~Kauai Electric Division of Citizens Utilities Company: May 1, 1993. The commission will initiate each three year planning cycle by establishing one or more dockets to administer the planning process for each utility with a three-year cycle for major reviews.~~
 - (1) The commission shall establish one or more advisory groups for each utility and/or for several energy utilities collectively.
 - (2) The commission may establish one or more technical advisory groups or technical advisory committees within advisory groups to assist in monitoring, evaluating and interpreting the assumptions, modeling and analysis utilized in the preparation of the utility integrated resource plans and action plans.
- b. ~~Gaseo, Inc.: May 1, 1993. At the beginning of each three-year IRP review cycle the commission may (independently or after a public meeting) specify:~~
 - (1) questions and issues that the specific round of IRP analysis and the resulting plan should address, and
 - (2) any specific objectives or scenarios that should be considered in that specific round of IRP analysis.
- c. ~~Hawaiian Electric Company, Inc.: July 1, 1993. The three year planning cycle shall establish and review:~~
- d. ~~Hawaii Electric Light Company, Inc.: September 1, 1993.~~
- e. ~~Maui Electric Company, Limited: November 1, 1993.~~
 - (1) planning assumptions (projected demand, fuel prices, resource characteristics), including identification of possible future scenarios to be considered in developing plans and action plans.
 - (2) analytical methods (integration modeling, rate impact analyses, etc), including methods to consider identified scenarios.
 - (3) a base long range (20 year) resource plan.
 - (4) a five year (or longer) action plan.

2. ~~Each utility shall conduct a major review of its integrated resource plan every three years. In such a review, a new 20-year time horizon shall be adopted, the planning process repeated, and the utility's resource programs re-analyzed fully. The first major review, following the submission of each utility's initial integrated resource plan to the commission in 1993, shall commence in 1995 so as to result in the submission to the commission of a new (second) integrated resource plan and implementation schedule in 1996 as follows:~~Ongoing Analysis and Planning Capability.

a. Each utility would maintain a modeling and analysis capability that is current and up to date at all times.

(1) On an ongoing basis, the utility shall update all important planning assumptions, forecasts, demand estimates, etc., as frequently as circumstances require and configure the planning process analytical models accordingly.

(2) The utility shall notify the commission and shall notify and solicit comments to be forwarded to the commission from all planning docket parties and advisory group(s) whenever planning assumptions are updated.

b. As needed for any regulatory purposes, the commission will request prompt and timely analysis from the utilities based on current, up-to-date planning assumptions.

(1) In the context of any docket, the commission may issue information requests to the utility requesting information and/or analysis based on current planning assumptions and modeling analysis capability.

(2) Planning docket parties and utility advisory group members shall be notified of any requests for information or analysis and documents shall be made available via the Commission's Document Management System.

(3) The commission may, at its discretion, issue any information requests and/or responses by the utility to the planning docket parties or participants, the advisory group(s) or any technical advisory group(s) or committee(s) for review and comment.

3. Current Action Plan.

a. Hawaiian Electric Company, Inc.: January 1, 1996-Each utility shall maintain a current, up-to-date action plan at all times.

- (1) To the extent that circumstances or changes in planning assumptions substantially affect the merits of the base resource plan or action plan, the Commission, parties and advisory group shall be notified.
- (2) Action plans shall be updated in accordance with supporting analytical methods and with the informed advice of the parties and advisory group.
- b. ~~Kauai Electric Division of Citizens Utilities Company: April 1, 1996.~~ Modified (updated) action plans would be prospective pending any explicit approval of any action plan components by the commission but would always be kept up-to-date and publicly accessible to inform all stakeholders of current planning assumptions presumed by the utility.
 - (1) Actions proposed by the utility in any docket before the commission would be reviewed by the commission in light of the current, most recently approved action plan.
 - (2) If proposed actions are not consistent with the most recently approved action plan, the proposed actions must be consistent with the current updated action plan which should be reviewed by the commission prior to or concurrently with the commission's review of the proposed action with the informed advice of the planning docket parties and advisory group(s).
- c. ~~Gaseco, Inc.: April 1, 1996.~~ Any approval of modifications to the utility integrated resource plan or action plan in a docket that considers actions not consistent with the approved utility integrated resource plan or approved action plan shall be made with the informed advice of the planning docket parties and participants in the advisory group(s). The utility shall specify and, after opportunity for comment by the planning docket parties and participants in the advisory group(s), the commission shall determine:
- d. ~~Hawaii Electric Light Company, Inc.: June 1, 1996.~~
- e. ~~Maui Electric Company, Limited: October 1, 1996.~~

~~Thereafter, each utility shall conduct a major review, resulting in the submission to the commission of a new integrated resource plan and implementation schedule on the same day every three years.~~

- (1) The extent to which any proposed actions are not consistent with the approved integrated resource plan and approved action plan.
- (2) The extent to which any proposed actions would affect any other aspects of the approved integrated resource plan and approved action plan.
- (3) Whether the proposed actions and resulting associated changes in the integrated resource plan and action plan are reasonable and in the public interest.

4. Evaluations.

- a. As required by the commission each utility shall provide evaluations of the implementation of integrated resource plans, action plans and the attainment of planning objectives and statutory objectives.

C. The Docket

- 1. Each planning cycle for a utility will commence with the issuance of an order by the commission opening a docket for integrated resource planning.
- 2. The docket will be maintained throughout the planning cycle for the filing of documents, the resolution of procedural disputes and other purposes related to the utility's integrated resource plan.
- 3. Within 30 days after the opening of the docket or, if petitions to intervene are filed within twenty days of the opening docket, by a date specified by the commission, the utility and parties shall prepare, in consultation with the consumer advocate, and file with the commission a proposed procedural order and procedural schedule that it intends to follow in for the development of its the utility integrated resource plan and action plan.
 - a. The schedule may be amended upon the formation of an advisory group or groups and thereafter as appropriate procedural schedule shall identify several stages of the planning process and specify dates, at each stage, for filings with the commission by the utility and parties and allowing filing of comments by participants in the advisory group(s). Stages shall include:
 - (1) Identification and determination of scenarios and planning assumptions.
 - (2) Identification and determination of analytical methods and models including methods to evaluate identified scenarios.

- (3) Identification of candidate resource strategies to be evaluated.
- (4) Proposed integrated resource plan(s) and action plan(s).
- 4. The utility shall complete its integrated resource plan and program implementation schedule within one year of the commencement of the planning cycle or according to a schedule approved by the commission.
- 5. Any party or advisory group member could petition the Commission at any time requesting the Commission's attention to review or take action regarding changes to planning assumptions or changes in action plans.
 - a. Parties or participants may request relief from the Commission by motion.
 - b. Parties, participants or advisory group members may petition the commission for action regarding changes to planning assumptions, long range plans or action plans by an informally by letter. Any such requests will conform to the requirements in the commission's existing rules regarding informal complaints.

D. Submissions to the Commission

- 1. ~~The~~In each three year general review, the utility shall submit its integrated resource plan as follows.
 - a. The utility shall include in its integrated resource plan a full and detailed description of (1) the generation, major distribution, and transmission needs identified; (2) the forecasts made, including supply- and demand-side distributed generation forecasts; (3) the assumptions underlying the forecasts; (4) the objectives to be attained by the plan; (5) the measures by which achievement of the objectives is to be assessed; (6) the resource options or mix of options included in the plan; (7) the assumptions and the basis of the assumptions underlying the plan; (8) the risks and uncertainties associated with the plan; (9) the revenue requirements on a present value basis and on an annual basis; (10) the expected impact of the plan on demand; (11) the expected achievement of objectives; (12) the potential impact of the plan on rates, and consumer bills, including any potential rate and billing impacts due to possible rate equalization measures between utility service territories, and consumer energy use; (13) the plan's external costs and benefits; and (14) the relative sensitivity of the plan to changes in assumptions and other conditions. The items enumerated should, where appropriate, be described for the plan as a whole and for each of the resources or mix of resources included in the plan.

- b. The utility shall file with the integrated resource plan a full and detailed description of the analysis or analyses upon which the plan is based. The utility shall fully describe, among other things, (1) the data (and the source of the data) upon which needs were identified and forecasts made; (2) the methodologies used in forecasting; (3) the various objectives and measures of assessing attainment of objectives that were considered, but rejected, and the reasons for rejecting any objective or measure; (4) the resource options that were identified, but screened out and not considered and the reasons for the rejection of any resource option; (5) the assumptions and the basis of the assumptions, the risks and uncertainties, the costs, effectiveness, and benefits (including external costs and benefits) and the impacts on demand, rates, consumer bills, and consumer energy uses associated with each resource option or mix of options that was considered; (6) the comparisons and the cost, effectiveness, and benefit tradeoffs and optimization made of the options and mixes of options; (7) the models used in the comparisons, tradeoffs, and optimization; (8) the criteria used in any ranking of options and mixes of options; and (9) the sensitivity analyses conducted for the options and mixes of options.
 - c. The utility shall also file with the integrated resource plan a description of all alternate plans that the utility developed, the ranking it accorded the various plans, the criteria used in such ranking, and a full and detailed explanation of the analysis upon which it decided its preferred integrated resource plan.
 - d. The submissions should be simply and clearly written and, to the extent possible, in non-technical language. Charts graphs, and other visual devices may be utilized to aid in understanding its plan and the analyses made by the utility. The utility shall provide an executive summary of the plan and of the analyses and appropriately index its submissions.
2. ~~The~~In each three year general review, the utility shall submit its ~~program implementation schedule~~action plan as follows.
- a. The utility shall include in the ~~schedule~~action plan by year: the programs or phases of programs to be implemented in the year; the expected level of achievement of objectives; the expected size of the target group or level of penetration of any demand-side management program; the expected supply-side capacity addition; the expenditures, by cost categories and cost elements, required to be made by the utility to support implementation of each program or phase of a program.

- b. The utility shall file with its ~~program implementation schedule~~action plan a full and detailed description of the analysis upon which the schedule is based. The utility shall fully describe, among other things:
 - (1) The steps required to realize and implement the supply-side and demand-side resource programs included in the schedule.
 - (2) How the target groups were selected and how program penetration for demand-side management programs and the expected levels of effectiveness in achieving integrated resource planning objectives were derived.
 - (3) The expected annual effects of program implementation on the utility and its system, the ratepayers, the environment, public health and safety, cultural interests, the state economy, and society in general.
- c. The program implementation schedule shall also be accompanied by the utility's proposals on cost and revenue loss recovery and incentives, as appropriate.
- d. The utility shall include the expected transmission system additions and the estimated cost required to be made by the utility to support the implementation of the transmission additions.
- e. The utility shall include the identification of the expected major distribution system additions.
- f. The utility shall include identification of smart grid improvements and upgrades to the utility system and the estimated cost required to be made by the utility to support the implementation of any smart grid improvements.
- 3. The utility shall ~~submit its annual evaluation as follows~~regularly update its action plan as circumstances require so as to always maintain a current and up-to-date action plan.
 - a. The utility shall ~~include in its annual evaluation~~make, on an ongoing basis, an assessment of the continuing validity of the forecasts and assumptions upon which its integrated resource plan and its ~~program implementation schedule~~action plan were fashioned.
 - b. The utility shall also include for each program or phase of program included in the ~~program implementation schedule for the~~

~~immediately preceding year a comparison of~~action plan current information as follows:

- (1) The expenditures anticipated to be made and the expenditures actually made, ~~by cost categories and cost elements.~~
 - (2) ~~The level of achievement of objectives anticipated and the level actually attained, for each program or action identified in the action plan.~~
 - (2) (3) The target group size or level of penetration anticipated for each demand-side management program and the size or level actually realized.
 - (3) (4) The effects of program implementation anticipated and the effects actually experienced.
- e. ~~The utility shall provide an assessment of all substantial differences between original estimates and actual experience and of what the actual experience portends for the future.~~
- d. ~~Together with its annual evaluation, the utility shall submit a revised program implementation plan that drops the immediately preceding year from the schedule and includes a new year. The program implementation plan must always reflect a five-year time span.~~
4. The utility may at any time, as a result of ~~its annual evaluation or~~ a change in conditions, circumstances, or assumptions, revise or amend its integrated resource plan or its ~~program implementation schedule. All revisions and amendments must conform to the appropriate requirements of this part~~ action plan. Modified (updated) action plans would be prospective pending any explicit approval of any action plan components by the commission but would always be kept up-to-date and publicly accessible to inform all stakeholders of current planning assumptions presumed by the utility.
 5. The integrated resource plan and ~~program implementation schedule approved by the commission shall govern~~action plan shall serve as the context and analytical basis for the regulation of all utility expenditure for capital projects, purchased power, and demand-side management programs. Notwithstanding approval of an integrated resource plan: (a) an expenditure for any capital project in excess of ~~\$500,000~~\$500,000 shall be submitted to the commission for review as provided in paragraph 2.3.g.2 of General Order No.7; and (b) no obligation under any purchased power contract shall be undertaken and no expenditure for any specific demand-side management or demand response program included in an

integrated resource plan or a ~~program implementation schedule~~ action plan shall be made without prior commission approval. All power purchases from qualifying facilities and independent power producers shall be subject to statute and commission rules.

6. The commission, upon a showing that a utility has an ownership structure in which there is no substantial difference in economic interests between its owners and customers, may waive or exempt that utility from any or all provisions of this framework, as appropriate.

E. Public Participation

To maximize public participation in each utility's integrated resource planning process, opportunities for such participation shall be provided through advisory groups to the utility, public hearings, and interventions in formal proceedings before the commission.

1. Advisory groups

- a. The utility commission shall organize in each county in which the utility provides service or conducts utility business a group or groups of representatives of public and private entities to advise the provide independent review and input to each utility and the commission in the development of its integrated resource plan. A separate planning process. Different advisory groups or committees within an advisory group may be formed for each stage of different issues related to the planning process, as appropriate. The utility shall chair each advisory group.
- b. An independent facilitator appointed by the commission shall chair each advisory group. The costs of the independent facilitator shall be paid for by the utility, subject to recovery as part of its costs of integrated resource planning. The commission, by its staff or one or more commissioners, may participate in advisory group meetings to receive input from advisory group members.
- c. The membership of each advisory group shall be independent of any utility and be able to provide significant perspective or useful expertise in the development of the utility's integrated resource plan. The commission shall establish the membership of each advisory group as follows:
 - (1) Governmental members of each advisory group shall include, at minimum, the Consumer Advocate or the Consumer Advocate's designee, the director of the State of Hawai'i Department of Business, Economic Development & Tourism or the director's designee, and the mayor of the

county in which the utility in question provides service or conducts utility business or the mayor's designee.

- (2) Nongovernmental members shall include representatives of environmental, cultural, business, consumer, and community interests, and individuals with useful expertise in each county in which the utility provides service or conducts utility business.
 - (3) Parties admitted into the integrated resource planning docket shall be allowed to participate as advisory group members, as the commission deems appropriate.
 - (4) ~~b. The public and private entities includable in an advisory group are those that represent interests that are affected by the utility's integrated resource plan and that can provide significant perspective or useful expertise in the development of the plan. These entities include state and county agencies and environmental, cultural, business, and community interest groups. An advisory group should~~Each advisory group shall be representative of as broad a spectrum of interests as possible, subject to the limitation that the interests represented should not be so numerous as to make deliberations as a group unwieldy.
- e. ~~The utility shall consider the input of each advisory group; but the utility is not bound to follow the advice of any advisory group.~~
 - d. Each advisory group shall hold meetings during key phases of a utility's integrated resource planning process, with a minimum of quarterly meetings and more frequent meetings to the extent meaningful and practical.
 - e. If a utility is considering the use of an energy resource located in another utility's service territory, then that utility shall confer with the advisory group representing the service territory of the energy resource under consideration.
 - f. ~~a. A~~Each utility shall provide all data reasonably necessary for an advisory group to participate in the that utility's integrated resource planning process shall be provided by the utility, subject to the need to protect the confidentiality of customer-specific and proprietary information, provided that such customer-specific and proprietary information shall not be withheld where there are mechanisms to protect confidentiality.
 - g. An advisory group participating in a utility's integrated resource planning process, or qualified person(s) representing the advisory

group, shall be permitted to inspect and evaluate that utility's modeling, including but not limited to reviewing the inputs the utility has used for the modeling.

- h. Upon request from an advisory group, the Consumer Advocate, the State of Hawai'i Department of Business, Economic Development & Tourism, or a county represented in the advisory group, the utility shall use its modeling tools to run alternative scenarios based on alternate assumptions. At the utility's request, the commission may limit requests that are unduly repetitious or burdensome.
 - i. The Public Benefits Fee Administrator shall provide all data reasonably necessary for an advisory group to participate in developing and evaluating forecasts of energy efficiency programs.
 - j. ~~e-~~ The use by the advisory groups of the collaborative process is encouraged to arrive at a consensus on issues regarding recommendations or findings on issues. If consensus is not possible, recommendations or findings of an advisory group may be made by the vote of not less than the majority of the entire membership of that advisory group.
 - k. If a utility does not follow a recommendation or finding of an advisory group, it must provide to the advisory group and file with the commission a detailed justification why the recommendation or finding should not be adopted. The advisory group and/or its members shall have an opportunity to respond to the filing.
 - l. At any point during the integrated resource planning process, an advisory group or one or more of its members may request interim relief from the commission to resolve a significant dispute with the utility in the implementation of the planning process. Such a request will be handled as an informal complaint under the commission's rules.
 - m. ~~f-~~ All reasonable out-of-pocket costs incurred by participants in the members of the advisory groups (other than governmental agencies) participating in a utility's integrated resource planning process shall be paid for by the that utility, subject to recovery as part of the that utility's cost of integrated resource planning.
2. Public hearings
- a. ~~The~~ Each utility is encouraged to conduct public hearings ~~meetings~~ or provide public forums at the various, discrete phases of the planning process for the purpose of securing the ~~input~~ of those

~~members of the public who are not represented by entities constituting advisory groups; public input.~~

b. Prior to filing a request for approval of an integrated resource plan, each utility shall provide an opportunity for public review and comment on the proposed plan during a period of not less than sixty (60) days. During each such public comment period, the utility shall hold at least one public hearing on each island that would be affected by the proposed integrated resource plan at which the public will have the chance to ask questions, seek clarification, raise concerns, and make comments and suggestions.

c. Each utility preparing an integrated resource plan shall assess and consider comments received during the public review and comment period and shall respond by one or more of the means listed below, stating its response in the request for approval filed with the commission:

- (1) Modify the plan;
- (2) Develop and evaluate alternatives not previously given serious consideration by the utility;
- (3) Supplement, improve, or modify its analysis;
- (4) Make factual corrections; and/or
- (5) Explain why the comments do not warrant further response, citing the sources, authorities, or reasons that support the utility's position and, if appropriate, indicate those circumstances that would trigger utility reappraisal or further response.

d. ~~Upon the filing of requests for approval of an integrated resource plan or projects,~~ the commission may, and it shall where required by statute, conduct public hearings for the purpose of securing additional public input on the utility's proposal. The commission may also conduct such informal public meetings as it deems advisable.

3. Intervention

a. Upon the filing of its integrated resource plan, the utility shall cause to be published in a newspaper of general circulation in the State a notice informing the general public that the utility has filed its proposed integrated resource plan with the commission for the commission's approval. The commission and the utility shall also post such public notice online on their respective websites.

- b. To encourage public awareness of the filing of a proposed utility plan, a copy of the proposed plan and the supporting analysis shall be available for public review at the commission's office and at the office of the commission's representative in the county serviced by the utility. ~~In the case of Maui Electric Company, Limited, the utility shall also make a copy of its proposed plan and the supporting analysis available at a public library on each of the islands of Molokai and Lanai. In the case of Hawaii Electric Light Company, Inc., the utility shall also make a copy of its proposed plan and the supporting analysis available at a public library in Kona.~~ The commission and the utility shall provide electronic copies of these documents online on their respective websites. Each utility shall note the availability of the documents for public review at these locations in its published notice. The utility shall make copies of the executive summary of the plan and the analysis available to the general public at no cost, except the cost of duplication.
 - c. Applications to intervene or to participate without intervention in any proceeding in which a utility seeks commission approval of its integrated resource plan are subject to the rules prescribed in part IV of the commission's General Order No.1 (Practice and Procedure before the Public Utilities Commission); except that such applications may be filed with the commission not later than 20 days after the publication by the utility of a notice informing the general public of the filing of the utility's application for commission approval of its integrated resource plan, notwithstanding the opening of the docket before such publication.
 - d. A person's status as an intervenor or participant shall continue through the life of the docket, unless the person voluntarily withdraws or is dismissed as an intervenor or participant by the commission for cause.
4. Intervenor funding
- a. Upon the issuance of the commission's final order on a utility's integrated resource plan or any amendment to the plan, the commission may grant an intervenor or participant (other than a governmental agency, a for-profit entity, and an association of for-profit entities) recovery of all or part of the intervenor's or participant's direct out-of-pocket costs reasonably and necessarily incurred in intervention or participation. Any recovery and the amount of such recovery are in the sole discretion of the commission.
 - b. To be eligible for such recovery:

- (1) The intervenor or participant must show a need for financial assistance;
 - ~~(2) The intervenor or participant must demonstrate that it has made reasonable efforts to secure funding elsewhere, without success;~~
 - ~~(2)~~ ~~(3)~~ The intervenor or participant must maintain accurate and meaningful books of account on the expenditures incurred; and
 - ~~(3)~~ ~~(4)~~ The commission must find that the intervenor or participant made a substantial contribution in assisting the commission in arriving at its decision.
- c. The intervenor's or participant's books of account are subject to audit, and the commission may impose other requirements in any specific case.
- d. Such ~~allowance~~recovery may be ~~made only~~provided upon the application of the intervenor or participant within ~~20~~30 days after the issuance of the commission's final order (or the entry of a settlement between the parties), together with justification and documented proof of the costs incurred.
- ~~e.~~ The commission may provide for recovery via periodic installments during the course of a proceeding. To be eligible for this option, the intervenor or participant shall file a notice of intent to seek recovery and an estimated budget within 30 days after being granted intervention or participation. The intervenor or participant may thereafter make periodic applications for recovery during the proceeding, within the final deadline specified above. The intervenor or participant may request to revise the estimated budget as appropriate.
- ~~f.~~ e. The costs of intervenor funding shall be paid for by the utility, subject to recovery as part of its costs of integrated resource planning.

~~F.~~ **Cost Recovery and Incentives**

- ~~1. The utility is entitled to recover its integrated resource planning and implementation costs that are reasonably incurred, including the costs of planning and implementing pilot and full-scale demand-side management programs.~~
- ~~a. The cost recovery may be had through the following mechanisms:~~

- ~~(1) — Base rate recovery — the inclusion of costs in the utility's base rate during each rate case. A balancing account may be appropriate in this instance to reconcile, with interest, the utility's recovered expenditures with its actual expenditures. It may also be appropriate to consider the utility's under expenditure of authorized cost to limit recovery, unless program objectives are met or exceeded.~~
- ~~(2) — Adjustment clause — the recovery of costs incurred between rate cases in excess of the baseline integrated resource planning related costs that are included in the utility's base rates.~~
- ~~(3) — Ratebasing — the inclusion of costs that are capital in character (i.e., expenditures considered to produce long-term savings or benefits, such as appliance rebates, loans, etc.), with accumulated AFUDC, in the utility's rate base at its next rate case. The costs are to be amortized over a period set by the commission.~~
- ~~(4) — Escrow accounting — the accumulation, with interest, of costs, not capital in character, incurred between rate cases and not otherwise recovered through the utility's base rates, adjustment clause, or rate base, in a deferred account, to be amortized over a period set by the commission.~~
- ~~h. — The commission will determine the appropriate mechanism for the recovery of costs associated with demand side management programs when specific demand side management programs are submitted for commission approval. Cost recovery for other integrated resource programs generally will be addressed in each utility's rate case.~~
- ~~2. — Under appropriate circumstances, the utility may recover the net loss in revenues sustained by the utility as a result of successful implementation of full scale demand side management programs sponsored or instituted by the utility.~~
 - ~~a. — The net revenue loss is the revenue lost less the variable fuel and operating expenses saved by the utility as a result of not having to generate the unsold energy.~~
 - ~~b. — The commission will determine whether the utility will be permitted to recover the net revenues lost as a result of successful implementation of a full scale demand side management program and the form of the recovery mechanism. The determination will~~

~~be made when an application is filed for approval of the demand-side management program.~~

- ~~3. Under appropriate circumstances, the commission may provide the utility with incentives to encourage participation in and promotion of full scale demand side management programs.~~
 - ~~a. The incentives may take any form approved by the commission. Among the possible forms are:

 - ~~(1) Granting the utility a percentage share of the gross or net benefits attributable to demand side management programs (shared savings).~~
 - ~~(2) Granting the utility a percentage of certain specific expenditures it makes in demand side management programs (mark-up).~~
 - ~~(3) Allowing the utility to earn a greater than normal return on equity for ratebased demand side management expenditures (rate base bonus).~~
 - ~~(4) Adjusting the utility's overall return on equity in response to quantitative or qualitative evaluation of demand side management program performance (e.g., adjusting the return upward for achieving a certain level of kilowatt or kilowatt-hour savings) (ROE adjustment).~~~~
 - ~~b. The commission will determine whether the utility will be provided with incentives and the form of such incentives, if any, when specific demand side management programs are submitted for approval. The utility may propose incentive forms for a particular program, based on the particular attributes of the program and the results to be attained.~~
 - ~~c. The commission may terminate any and all incentives whenever circumstances or conditions warrant such termination.~~

IV. PLANNING CONSIDERATIONS

A. Forecast Scenarios

Each utility, in consultation with advisory group(s), shall develop scenarios to guide integrated resource planning, including but not limited to possible assumptions, regarding future demand, the availability, characteristics and costs of resource options, and other principal factors that would affect the determination of prudent integrated resource plans. Scenarios may be based on circumstances outside the control of the utilities and commission (e.g., major increases in oil

prices) or within their control (e.g., a major resource strategy). A sufficient number and range of scenarios should be developed to (1) incorporate a broad range of perspectives and input from non-utility stakeholders and the public; (2) provide meaningful breadth to the scope of analysis and assumptions; (3) frame meaningful planning objectives and measures of attainment; and (4) test the robustness of candidate strategies with respect to a range of possible future circumstances and risks.

B. Forecasts

Forecasts shall be conducted with respect to each scenario to inform the development of each utility's integrated resource plan.

1. Demand

- a. ~~1-~~The utility, in consultation with advisory group(s), shall develop a range of forecasts of the amount of energy consumers will ~~need~~demand over the planning horizon. ~~It shall develop forecasts for multiple scenarios that are necessary or appropriate in the development of its integrated resource plan. Among the scenarios are the base case scenario (a scenario based on the most likely assumptions), a high-growth scenario, and a low-growth scenario.~~
- b. ~~2-~~Each forecast shall identify the significant demand and use determinants; describe the data, the sources of the data, the assumptions (including assumptions about fuel prices, energy prices, economic conditions, demographics, population growth, technological improvements, and end-use), and the analysis upon which the forecast is based; indicate the relative sensitivity of the forecast result to changes in assumptions and varying conditions; and describe the procedures, methodologies, and models used in the forecast, together with the rationale underlying the use of such procedures, methodologies, and models.
- c. ~~3-~~Among the data to be considered are historical data on energy sales, peak demand, system load factor, system peaks, and such other data of sufficient duration to provide a reasonable basis for the utility's estimates of future demand.
- d. ~~4-~~As feasible and appropriate, the forecast shall be by the system as a whole and by customer classes.
- ~~5-~~ ~~The utility shall use all reasonable methodologies in forecasting, including, as practicable and economically feasible, the disaggregated end-use methodology.~~

2. Demand-Side Management

- a. Energy Efficiency: The PBFA shall work with each utility and advisory group(s) to develop a range of forecasts of the potential development of energy efficiency programs over the planning horizon.
- b. Load management: Each utility shall work with the PBFA and advisory group(s) to develop a range of forecasts of the potential development of demand response and load management programs, including rate and fee design measures, over the planning horizon.

3. Distributed Generation

Each utility shall work with advisory group(s) to develop a range of forecasts of the amount of distributed generation development and penetration via NEM, FIT, and other means.

C. B. Objectives

- 1. The ultimate objective of ~~a~~each utility's integrated resource plan is to achieve and exceed Clean Energy Objectives in meeting the energy needs of the utility's customers over the ensuing 20 years.
- 2. ~~The utility may specify any other utility-specific objective that it seeks to achieve through its integrated resource plan. For example, given the parameter of the State goal of less dependence on imported oil, the utility may set as an objective the achievement of lowering to a specified level the use of imported oil.~~ Each utility, in consultation with advisory group(s), shall identify a meaningful set of planning objectives for its integrated resource plan and shall identify more specific, shorter-term objectives for its action plans to facilitate achievement the objectives of the integrated resource plan and provide benchmarks to measure progress.
- 3. ~~The commission may specify other objectives for the utility. Such specifications, if any, shall be included in the order opening docket for integrated resource planning at the commencement of each planning cycle.~~ plan or action plans.
- 4. An advisory group may recommend objectives for the integrated resource plan or action plans to the utility or the commission.

D. C. Effectiveness Measures

- 1. ~~The utility~~integrated resource plan and action plans shall specify the measures by which attainment of the objective or objectives is to be determined.
- 2. Where direct, quantifiable measures are not available, ~~the utility may~~ utilize proxy measures ~~may be used.~~

E. ~~D.~~ Resource Options

1. In the development of its integrated resource plan, the utility shall consider all feasible supply-side and demand-side resource options appropriate to ~~Hawaii~~Hawai'i and available within the years encompassed by the integrated resource planning horizon to meet the stated objectives.
2. The utility shall include among the options the supply-side and demand-side resources or mixes of options currently in use, promoted, planned, or programmed for implementation ~~by the utility, as well as potential or planned retirements of existing resources in favor of clean energy resources.~~ Supply-side and demand-side resource options include those resources that are or may be supplied by persons other than the utility.
3. The utility shall initially identify all possible supply-side and demand-side resource options. The utility may, upon review and consultation with advisory group(s), screen out those options that are clearly infeasible. ~~An option may be deemed infeasible where the option's life cycle costs clearly outweigh its benefits or effectiveness under both societal cost-benefit and utility cost-benefit assessments.~~ The utility, in consultation with the advice of the advisory groups~~group(s)~~, may establish such other criteria for screening out clearly infeasible options.

E. ~~E.~~ Data Collection

1. For each feasible resource option, the utility shall determine its life cycle costs and benefits and its potential level of achievement of objectives. The utility shall identify the option's total costs and benefits--the costs to the utility and its ratepayers and the indirect, including external (spillover), costs and benefits. External costs and benefits include the cost and benefit impact on the environment, people's lifestyle and culture, and the State's economy.
2. To the extent helpful in analysis, the utility shall distinguish between fixed costs and variable costs and between sunk costs and incremental costs; and the utility shall identify any opportunity costs.
3. The costs and benefits shall, to the extent possible and feasible, be (a) quantified and (b) expressed in dollar terms. When it is neither possible nor feasible to quantify any cost or benefit, such cost or benefit shall be qualitatively measured. The methodology used in quantifying or in qualitatively stating costs and benefits shall be detailed.

G. ~~F.~~ Assumptions; Risks; Uncertainties

1. The utility shall identify the assumptions underlying any resource option or the cost or benefit of any option or any analysis performed.

2. The utility shall also identify the risks and uncertainties associated with each resource option.
3. The utility shall further ~~identify~~identity any technological limitations, infrastructural constraints, legal and governmental policy requirements, and other constraints that impact on any option or the utility's analysis.

H. ~~G.~~ Models

1. The utility may utilize ~~any reasonable model or one or more generally accepted planning models or methodologies~~ in comparing resource options and otherwise in analyzing the relative values of the various options or combinations of options.
2. Each model or methodology used must be fully described ~~and, documented, and explained in terms that a layperson can understand.~~

I. ~~H.~~ Analyses

1. The utility shall conduct ~~cost-benefit and cost-effectiveness~~ analyses to compare and weigh the various options and various alternative mixes of options. Alternative mixes of options include variously integrated supply-side and demand-side management programs.
2. The utility shall conduct such analyses from varying perspectives, including, as appropriate, the utility cost-benefit perspective, the ratepayer impact perspective, the participant impact perspective, the total resource cost perspective, and the societal cost-benefit perspective.
3. The utility shall analyze all options on a consistent and comparable basis. It shall give the costs, effectiveness, and benefits of demand-side management options consideration equal to that given to the costs, effectiveness, and benefits of supply-side options. The utility may use any reasonable and appropriate means to assure that such equal consideration is given.
4. The utility shall compare the options on the present value basis. For this purpose, the utility shall discount the estimated annual costs (and benefits, as appropriate) at an appropriate rate. The utility shall fully explain the rationale for its choice of the discount rate.
5. The utility ~~may rank, as appropriate~~shall prioritize the various options and mixes of options based on the goal and principles set forth in Part II.A & B, supra, and upon such reasonable criterionadditional criteria as it may establish in consultation with the advice of its advisory groupsgroup(s).

J. ~~I.~~ Resource Optimization

1. The utility, in consultation with advisory group(s), shall develop a number of alternative strategies to meet the planning objectives. Strategies may be based on any of various themes, including addressing specific scenarios or featuring specific resource options. A sufficient spectrum of strategies should be developed and analyzed to consider the scope of the identified plausible resource options and planning scenarios.
2. ~~1-~~ Based on its analyses, the utility, in consultation with advisory group(s), shall select those resource options or mix of resource options strategies that best achieve that level of effectiveness or that level of benefits specified in the planning objectives at the least cost. The utility shall also identify those resource options or mix of resource options that achieve the highest level of effectiveness or level of benefits at various levels of cost considered across the range of scenarios.
 - a. ~~The options or mix of options strategies~~ shall be selected in a fashion as to achieve an integration of supply-side and demand-side options.
 - b. ~~The selection of options or mix of options strategies~~ constitutes the utility's integrated resource plan.
- ~~2. The utility shall develop a number of alternative plans, each representing optimization from a differing perspective, including the perspective of the utility, the ratepayers, the non-participant, and society. It shall also develop alternate plans to meet the needs identified by each demand forecast scenario.~~
3. For each ~~plan~~ strategy, the utility shall identify the revenue requirements on a present value and annual basis. It shall note the risks and uncertainties associated with the plan. ~~It shall also~~ and describe the ~~plan's~~ strategy's impact on rates, customer energy use, customer bills, and the utility system. It shall also describe the ~~plan's~~ strategy's impact on external elements--the environment, people's lifestyle and culture, the State's economy, and society in general.
4. The utility shall rank the various ~~plans~~ strategies, based on such ~~criterion~~ criteria as it may establish in consultation with the advice of its advisory group(s). The utility shall designate one or some combination of these ~~plans~~ strategies as its preferred plan and submit to the commission the preferred plan as its proposed integrated resource plan, along with the alternative plans. It is recognized that the proposed integrated resource plan may not be the least expensive strategy and may include resource options and/or contingency measures to reasonably attain the planning objectives in light of uncertainty regarding the planning scenarios.

K. ~~J.~~ Sensitivity Analysis

The utility shall subject its selection of resource options to sensitivity analysis by altering assumptions and other parameters.

~~V.~~ ~~PILOT DEMAND SIDE MANAGEMENT PROGRAMS~~**~~A.~~ ~~Purposes~~**

- ~~1. A purpose of piloting demand side management programs is to ascertain whether a given program, not yet proven in Hawaii, is cost effective—whether it will have the penetration and will achieve accomplishment of the utility's objectives as originally believed.~~
- ~~2. A second purpose of piloting demand side management programs is to determine whether the program design and configuration (including how it is managed and promoted) are such as to permit implementation of the program as efficiently and effectively as desired.~~

~~B.~~ ~~Utility Pilot Programs~~

- ~~1. A utility may implement on a full scale basis (without pilot testing) any demand side management program that has been proven cost effective as a result of a full scale or pilot implementation of the program in another comparable utility service territory or as a result of pilot testing by a utility in Hawaii. In all other case, the utility shall pilot test a demand side management program before implementing it on a full scale basis.~~
- ~~2. Each utility shall develop appropriate pilot demand side management programs for implementation without awaiting commission approval on its initial integrated resource plan. For each program, the utility shall clearly articulate the parameters of the program, the objectives to be attained by the program, the expected level of achievement of the objectives, the measures by which the attainment of the objectives is to be assessed, the data to be gathered to assist in the evaluation of the pilot program, and the expenditure it proposes to make by appropriate cost components.~~
- ~~3. All proposed pilot demand side management programs are subject to commission approval.~~

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CERTIFICATE OF SERVICE

I hereby certify that I have, on December 19, 2009 served a copy of the foregoing
FINAL STATEMENT OF POSITION OF HAIKU DESIGN AND ANALYSIS
AND ATTACHMENTS A, B, C & D upon the following entities, by first class mail
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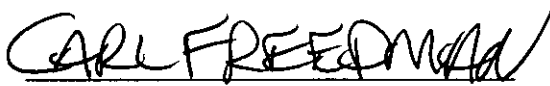
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Dated: December 19, 2009; Haiku, Hawaii

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